TECHNOLOGY DEPARTMENT

Modern

LITHOGRAPHY

Mergenthaler Linotype Company

presents the

LINOFILM *system*

This trademark identifies the only complete *system* for utilizing a thoroughly new concept of photocomposition through the entire production cycle of phototypesetting, revision and correction, and makeup to full-page size.

As revolutionary as the historic inventions of Johann Gutenberg and Ottmar Mergenthaler, LINOFILM becomes a valuable companion of the time-tested LINOTYPE line.

LINOFILM is the product of skilled research and engineering and of intensive field testing.

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For the best in cold type or hot metal, write

29 Ryerson Street • **LINOTYPE** • **Brooklyn 5, N. Y.**

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presensitized

LARGE PLATES

You get the fastest service on the widest selection of presensitized plates when you order from the Roberts & Porter branch near you—

R & P stocks include even the BIG sizes right on up to 59"!

Remember! Presensitized plates speed production ... save time and labor ... improve quality.

So, switch to presensitized today.

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INCORPORATED

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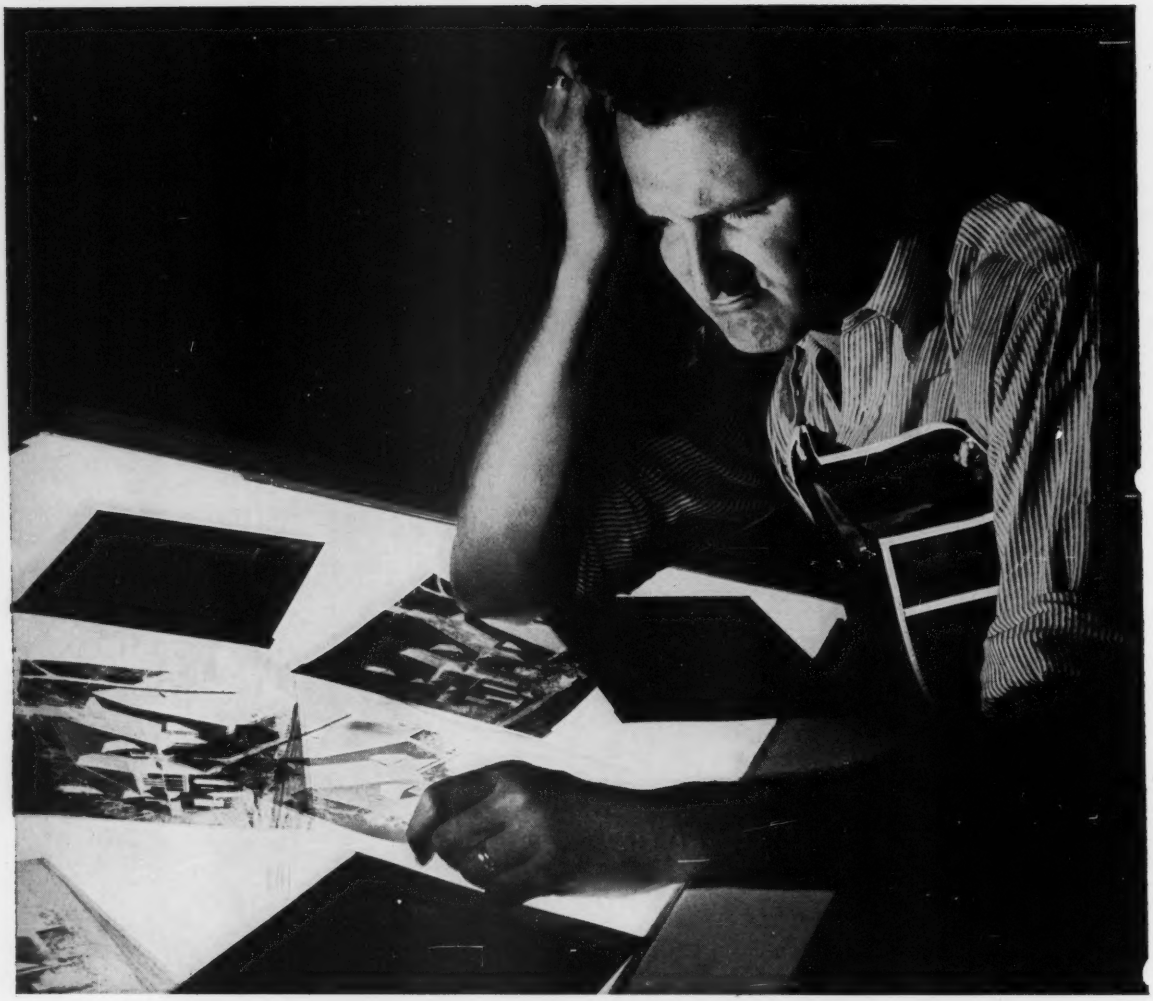

USE **GEVAERT** FILMS
If Make-Overs Make You Mad!

Of course there's no substitute for your professional talent . . . yet there are ways GEVAERT helps develop reputations! For GEVAERT has a wide, wide margin for error. You get perfection no matter what, even with minor exposure and developing miscalculations. How many other films offer as much . . . and prove it? And have you tried new GEVAERT Copyline film? This is a truly economical material particularly suitable for type or line reproduction work by contact or camera. For film that brings out the best in you . . . get GEVAERT!

COPYLINE FILM—excellent contrast; dries flat and fast; particularly suited for economical line reproduction.

LITHOLINE O 82p FILM—maximum contrast, highest sensitivity, latitude and resolving power. Polystyrene base for utmost stability.

O 81 LITHOLINE ORTHO—0.003" thick; thin base for line or screen positives and negatives.

O 82 LITHOLINE ORTHO—in regular base, same emulsion—0.006" thick.

P 23 FILM—a fast panchromatic emulsion. Long gradation, high resolving power, wide latitude in exposure and development. Ideal for color separation work.

GRAPHIC P 2 PLATE—for making separation negatives from color transparencies or copy. Same photographic characteristics as P 23 film.

GEVAERT THE GEVAERT COMPANY OF AMERICA, INC.

SALES OFFICES AND WAREHOUSES AT
321 West 54th Street, New York 19, N. Y.
6601 N. Lincoln Ave., Lincolnwood, Ill. (Chicago)
6370 Santa Monica Blvd., Los Angeles 38, Calif.
9109 Sovereign Row, Dallas, Texas
P.O. Box 9161, Denver, Colo.

Cover

Why is Lord Baltimore Press a safe place to work? Our cover photo this month shows two reasons—safety shoes (left) and safety glasses (right). For a picture story outlining many other reasons, turn to page 32.

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MODERN LITHOGRAPHY

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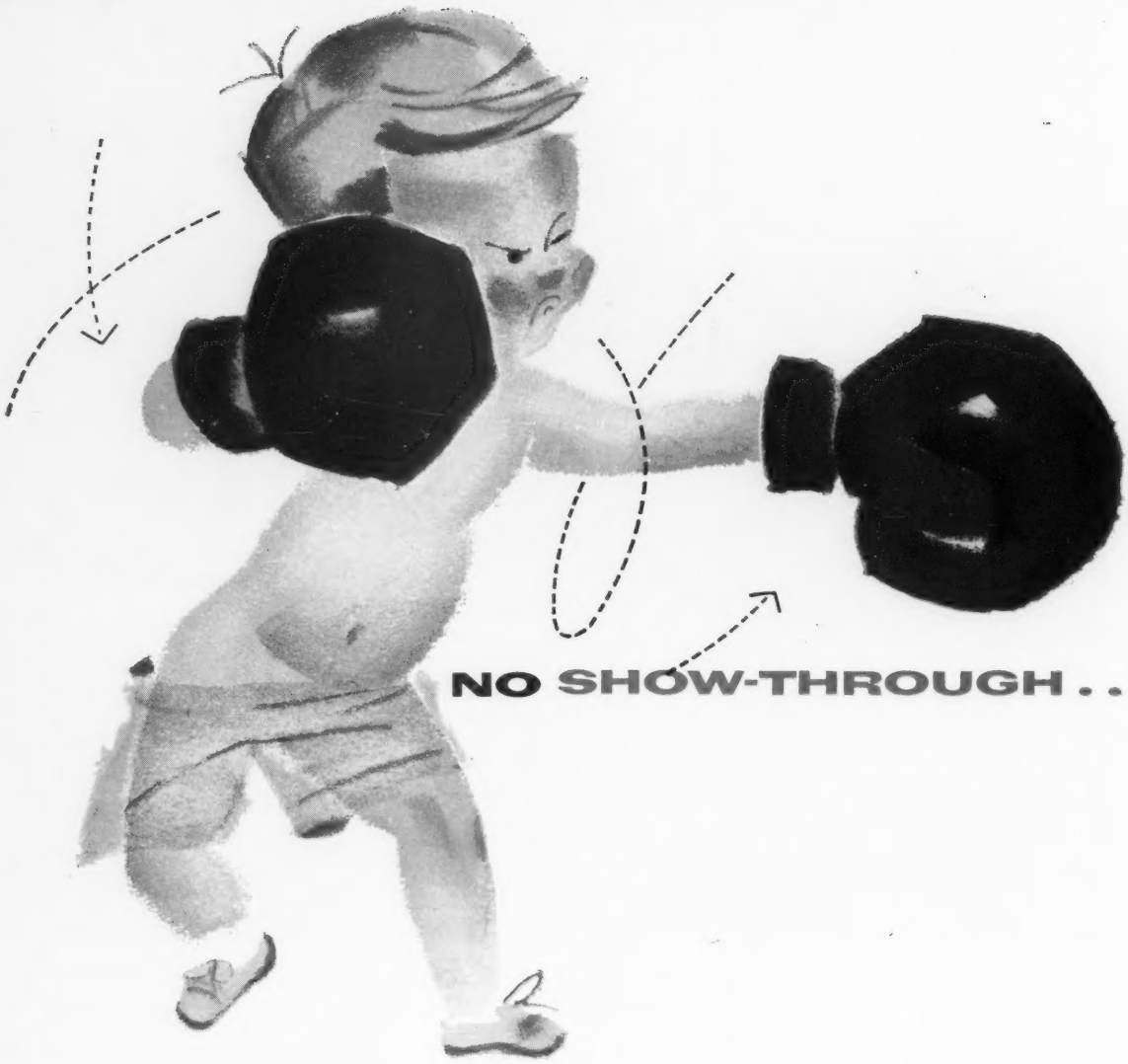

NO SHOW-THROUGH . . . .

Nekoosa Bond
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Nekoosa Mimeo
Nekoosa Manifold
Nekoosa Fax
Nekoosa Master-Lucent and companion ARDOR Papers

3 ways better

PRINTABILITY—Curl-free, wrinkle-free, Nekoosa Opaque goes through high-speed presses *fast*, letterpress or offset.

ECONOMY—Mail more pieces per ounce. Nekoosa Opaque is light in weight, yet keeps show-through to a minimum.

OPACITY—Nekoosa Opaque rates high in opacity, and it has a firm, smooth surface that reproduces full-colors or black-and-white beautifully.

.....even on lightweights

USE

Nekoosa OPAQUE

AND BEAT HIGH POSTAGE COSTS

Be kind to your customer's purse—and do yourself a favor, too—by using Nekoosa Opaque. It's a real money-saver! Thanks to Nekoosa Opaque's high opacity, now you can run on lighter weights and have a *show-piece* without *show-through!*

you look better on

Nekoosa papers

NEKOOSA-EDWARDS PAPER COMPANY
PORT EDWARDS, WISCONSIN

Mills at Port Edwards and Nekoosa, Wisconsin, and Potsdam, New York

"Cronar* saves us $5000 a year... and ups our production 25%"

—Caleb D. Hammond, President
C. S. Hammond & Company, Maplewood, N. J.

C. S. Hammond & Company is one of the nation's leading publishers of maps for encyclopedias, directories, atlases and globes. Founded in 1900, the firm now employs over 125 persons.

In President Hammond's own words, here's how Du Pont "Cronar" Ortho A has helped him save money and increase production:

"We have always insisted on maintaining highest standards of workmanship. When we used acetate films, we frequently had to re-shoot, since film shrinkage affected registration on finished maps, and this in turn affected accurate positioning of important landmarks and areas.

"Each four-color map we make requires upwards of 10 to 14 film negatives and four film positives. In making the negatives for an average map, we spent about $30 in labor and materials, which went down the drain if a re-shoot was necessary. We averaged about 160 re-shoots annually because of film instability.

"Since using 'Cronar' Ortho A, we have eliminated re-shoots due to film stretching or shrinking. Additional drafting can be done on the film with India ink, removed, and re-drawn without damaging the film. By eliminating the re-shoots, we have been able to effect a 25% increase in production. And we can store both positives and negatives indefinitely, secure in the knowledge that they will retain their dimensional stability during storage."

All these *plus* features can be *yours—and for the same price you pay for acetate film.* For more information on "Cronar" graphic arts films, write: E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware. In Canada: Du Pont of Canada Limited, Toronto.

*Du Pont's trademark for its polyester graphic arts films

DU PONT
REG. U. S. PAT. OFF.

Better Things for Better Living . . . *through Chemistry*

This advertisement was prepared exclusively by Phototypography

Trim books, magazines and pamphlets bound
one or two-up in lifts as high as 4¾"
at speeds from 10 to 25 cycles a minute . . .

LAWSON 3-KNIFE RAPID TRIMMER SERIES "C"

No matter how it's bound—side or saddle stitched . . . sewed or glued—
the Lawson accurately trims them with equal ease.
Sizes from 2" x 3⅛" to 11¾" x 17½" trimmed.
Automatic from infeed to conveyor. Get the full story of
the new Lawson 3-Knife Rapid Trimmer Series "C". Write for details today.

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Taylor Publishing Co.	Circle Bindery & Mailing System
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Seeman & Peters	Blanchard Press

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Division of Miehle-Goss-Dexter, Inc.
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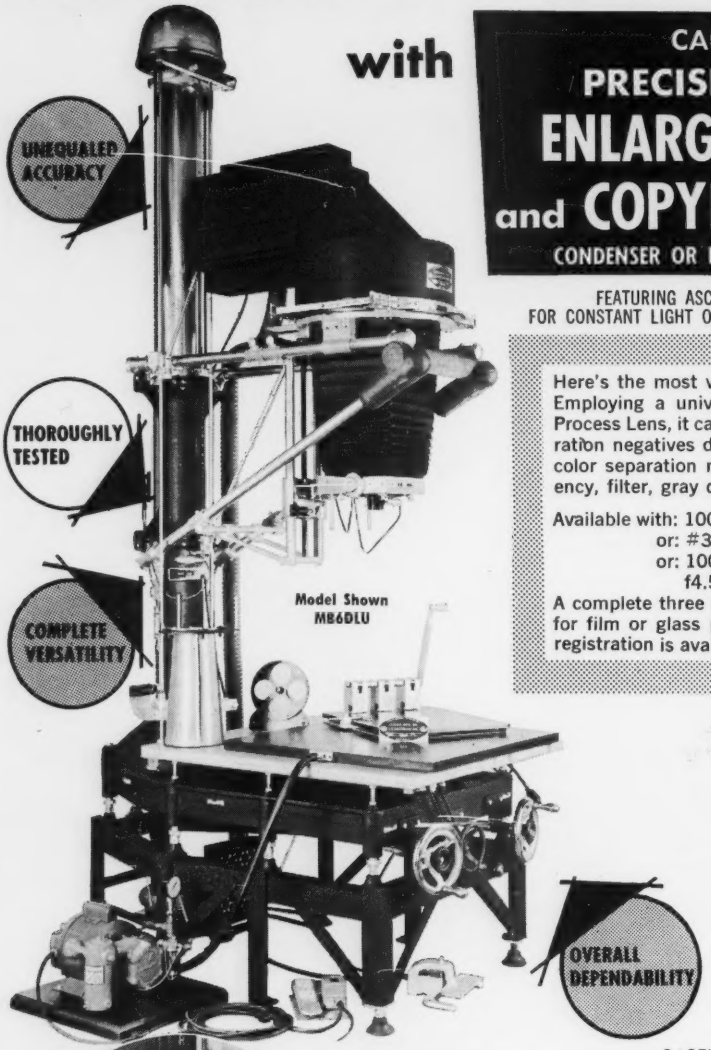
YOU GET MEASURABLY MORE FOR YOUR MONEY

with

CAESAR-SALTZMAN
PRECISION combination
ENLARGING, REDUCING and COPYING CAMERA FOR COLOR
CONDENSER OR DIFFUSED TYPE WITH REGISTRATION

FEATURING ASCORLUX PULSED XENON ARC LIGHT SOURCE
FOR CONSTANT LIGHT OUTPUT AND DAYLIGHT COLOR BALANCED SPECTRUM



Model Shown
ME6DLU

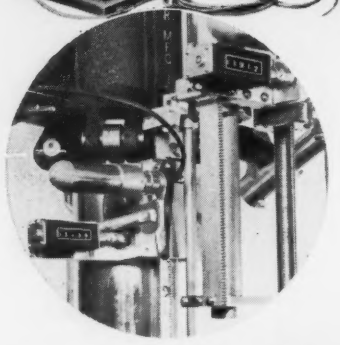
Here's the most versatile enlarger in the Graphic Arts field. Employing a universal light head and 12" f.9 Goerz Artar Process Lens, it can be used for making continuous tone separation negatives direct from copy, or continuous or halftone color separation negatives direct through a mask, transparency, filter, gray or magenta screen. Also halftone positives.

Available with: 1000 watt Xenon Pulsed Arc Light Source
or: #302 500 watt enlarging lamp
or: 1000 watt point light source for use with 12" f4.5 lens.

A complete three point registration system can be furnished for film or glass plates. A vacuum easel and punches with registration is available to specifications.

Accessories Available:

- Combination Enlarging & Copying Camera with Registration
- Three Point Glass Negative or Peg Registration System
- Lenses of Short Focal Length for Reductions
- Cones of Various Lengths for Reductions
- Variac, Voltmeter, and Voltage Stabilizer for Light Control
- Electronic Timer
- Special Positive Interlocking Lens and Camera Motion
- Precision Reducing Negative Holders
- Vacuum Easel with Pre-Register Screen Angles
- Vacuum Pump Assembly
- Lens Calibration and Ratio Factor Chart



COUNTERS ON CAMERA AND LENS MOTION

PARTIAL LIST OF USERS

Mid City Litho Service, Laurel, Md.
Krug Litho Arts Co., Kansas City, Mo.
International Typographical Union, Indianapolis, Ind.
Commercial Printers, Columbus, Ga.
Courier Journal & Louisville Times, Louisville, Ky.
Miami Herald Publishing Co., Miami, Florida
Consolidated Vultee Aircraft Corp., San Diego, Calif.
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Western Lithographing Co., St. Louis, Mo.
Dept. of National Defense, Ottawa, Canada
General Electric Co., Idaho Falls, Idaho
Johnson Printing, Inc., Eau Claire, Wisc.
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Gazette Printing, Ltd., Montreal, Que., Canada
Daily News, New York, N. Y.
Process Litho, Chicago, Ill.
Caterpillar, Peoria, Ill.
Case-Hoyt Corp., Rochester, N.Y.
Ford Motor Co., Dearborn, Mich.
Daily News, McKeesport, Pa.
Eastman-Kodak, Rochester, N. Y.
Pringle & Booth, Ltd., Toronto, Canada
C. F. Braun & Co., Alhambra, Calif.
McCalls Magazine, Stamford, Conn.
Knapp Engraving, New York, N. Y.
Edwards & Deutsch, Chicago, Ill.
Process Litho Arts, Chicago, Ill.
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Goodyear Aircraft, Akron, Ohio

Write For Complete Literature

Headquarters for Professional Photographic Equipment Since 1920

J. G. SALTZMAN, INC.

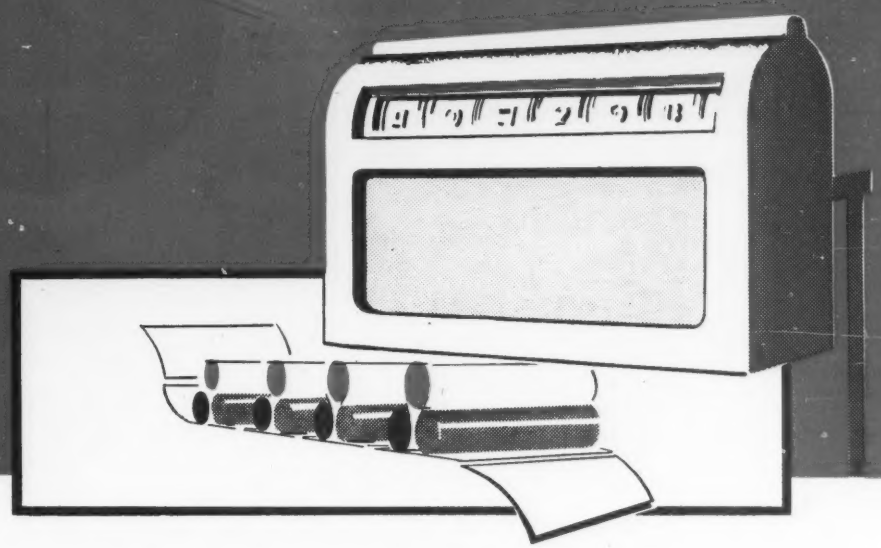
SALES DISTRIBUTORS for CAESAR MANUFACTURING, INC.

480 Lexington Avenue, New York 17, N. Y.

SL-100

SURFACE LACQUER

modern formulation to give long runs to plates...



You can see the difference on the finished job — you'll see a new sparkle in your work when you use SL-100 surface lacquer. It adds many impressions to the plate, has the non-blinding features of deep etch vinyl base lacquers, has a better affinity for ink and it's non-toxic. It's so easy to apply too!

LITHO CHEMICAL *and* SUPPLY CO., Inc.

MAIN OFFICE AND PLANT 46 HARRIET PLACE, LYNBROOK, L. I., NEW YORK

BRANCH PLANTS 4227 WEST 43rd ST., CHICAGO 32, ILL. • 1418-22 SANTA FE ST., LOS ANGELES 21, CAL.

"CHAMPION" *Improved* Deep Etch DOWN-DRAFT Lithographers Work Table

with
VARIABLE EXHAUST CONTROLLER

Completely eliminates
ALL HAZARDOUS FUMES

Check these advantages:

- Removes all hazardous fumes at their source—no odor in shop and offices.
- Table at convenient working height.
- Exhaust slot removes contaminated air through slot all around perimeter of working area at high velocity.
- Acid resistant KOROSEAL lined disposal pitches to a KOROSEAL lined 2" drain.
- Processing of plates on an everlasting smooth surfaced slate slab.
- Large heavy duty ball-bearing type built-in suction blower operates quietly.
- Increases production.

4 POPULAR SIZES *(Other sizes upon request)*

No.	Slate Slab	Overall Dimensions (All 33½" High)	Exhaust Blower Capacity: Cu. Ft. Air Per Minute	Motor H. P.
1	30" x 40"	42" x 50"	2500	1
2	42" x 50"	54" x 62"	3200	1½
3	50" x 60"	62" x 72"	4200	1½
4	60" x 80"	72" x 92"	4800	2

"CHAMPION" *Improved* TEMPERATURE CONTROLLED Developing Sinks

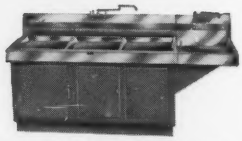
CONVENIENT TRAY DUMPING
Note how easily used solution is disposed of in full length drain trough. Saves time, promotes cleanliness and eliminates hazardous carrying of trays.

RAISED DIMPLES
in sink bottom are provided for supporting small trays.

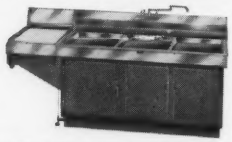
- Refrigerated by hermetically sealed water-cooled condensing unit.
- Full length back splash and tray disposal trough.
- Heavy polished stainless steel, type 316, heli-arc welded.
- Fiberglass insulation.
- Storage compartment has its own thermostat.
- Attractively finished.
- 18" Double-Swivel soft flow mixing faucet services all trays.
- Expert Craftsmanship.
- Easy Access to refrigerating unit and automatic control.
- Automatic light in storage compartment.
- Service light in center compartment.
- Wash tray slides to desired location, drains into rear trough from any position.

Available with attached wash sink and negative viewer.

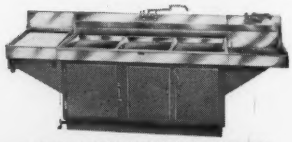
TEMPERATURE MAINTAINED to a FRACTION of a DEGREE



WITH ATTACHED WASH SINK



WITH ATTACHED NEGATIVE VIEWER



WITH WASH SINK AND VIEWER

3 popular sizes

Style	Film Size	Space Req.
No. 1	20" x 24"	32½" x 74"
No. 2	26" x 30"	39" x 93"
No. 3	30" x 40"	49" x 105"

manufactured by **H. SCHMIDT & CO.**
ESTABLISHED 1891

321 S. Paulina St., Chicago 12, Ill. SEeley 3-0404

How to get an order:

Just lay
a sheet of
the new white
Hammermill
Bond
next to the
sheet your
customer
has been
using

HAMMERMILL
BOND

THEY'RE BETTER BECAUSE:

THEY ABSORB WATER EVENLY, DAMPEN EVENLY
THEIR SOFT, SMOOTH SURFACE IS FREE OF SEAMS
THERE'S A SIZE (PRE-CUT LENGTHS, TOO) FOR EVERY PRESS
THERE'S NO FUZZ OR LINT TO HARM LITHO PLATES
THEY'RE SEAMLESS AND FIT SNUG NO CREEPS
AQUATEX
PATENTED
DAMPABASE ®

These little figures tell you the main story about AQUATEX outer covering and DAMPABASE undercushion for dampening rollers.

Discriminating lithographers throughout the world *demand* AQUATEX and DAMPABASE for all their dampening rollers. AQUATEX and DAMPABASE are better for you *now,* and they're better in the long run. Your savings in press time, plates, and stock will prove our point.

AQUATEX and DAMPABASE are sold by leading lithographic supply dealers. Ask your dealer, or call or write for information to

GODFREY ROLLER COMPANY

Roller Makers for 94 Years • WILLIAM P. SQUIBB, *President*

211-21 NORTH CAMAC STREET, PHILADELPHIA 7, PA.

ALL SET...simple as

with the compact new low-cost ATF TYPESETTER

By following the three simple steps shown you eliminate costly operations on text and tabular composition...and get top quality, low-cost work.

With this new ATF photomechanical system you get *high production* in turning out text matter for newspapers, advertising, catalogs, books, price lists, statistical material.

You also enjoy other important benefits. Low capital investment. Space compactness (the units are just slightly larger than standard electric typewriters). Low maintenance.

The ATF Typesetter is ready for use as soon as it is uncrated and plugged into any standard electrical outlet. Personnel can be trained quickly...and a competent operator can produce text as fast as 215 characters per minute.

See for yourself how easily and simply you get *all set* for copy. Send the coupon below for a demonstration of this latest development in photocomposition.

Heart of the ATF Typesetter system is the vinyl type disc on the Photographic Unit. Each disc carries two different fonts (roman and italic, for example) in one type size. A wide variety of faces is currently available...with more type faces being added constantly.

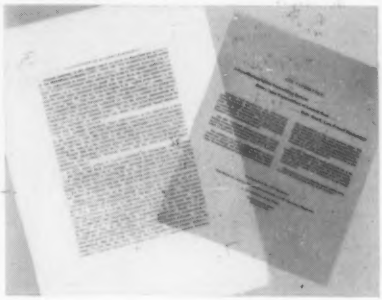
American Type Founders

200 Elmora Avenue, Elizabeth, N. J.

1 ...When text is typed on ATF Keyboard Unit, you get a typewritten proof of copy and a perforated tape which

2 ...automatically activates the photographic unit

3 ...transferring letter images from the type disc onto film or photographic paper for use in making offset, letterpress or gravure plates.



American Type Founders
Dept. ML, 200 Elmora Avenue, Elizabeth, N.J.

☐ I would like a demonstration of the new ATF Typesetter.
☐ Please send descriptive literature on the ATF Typesetter.

NAME

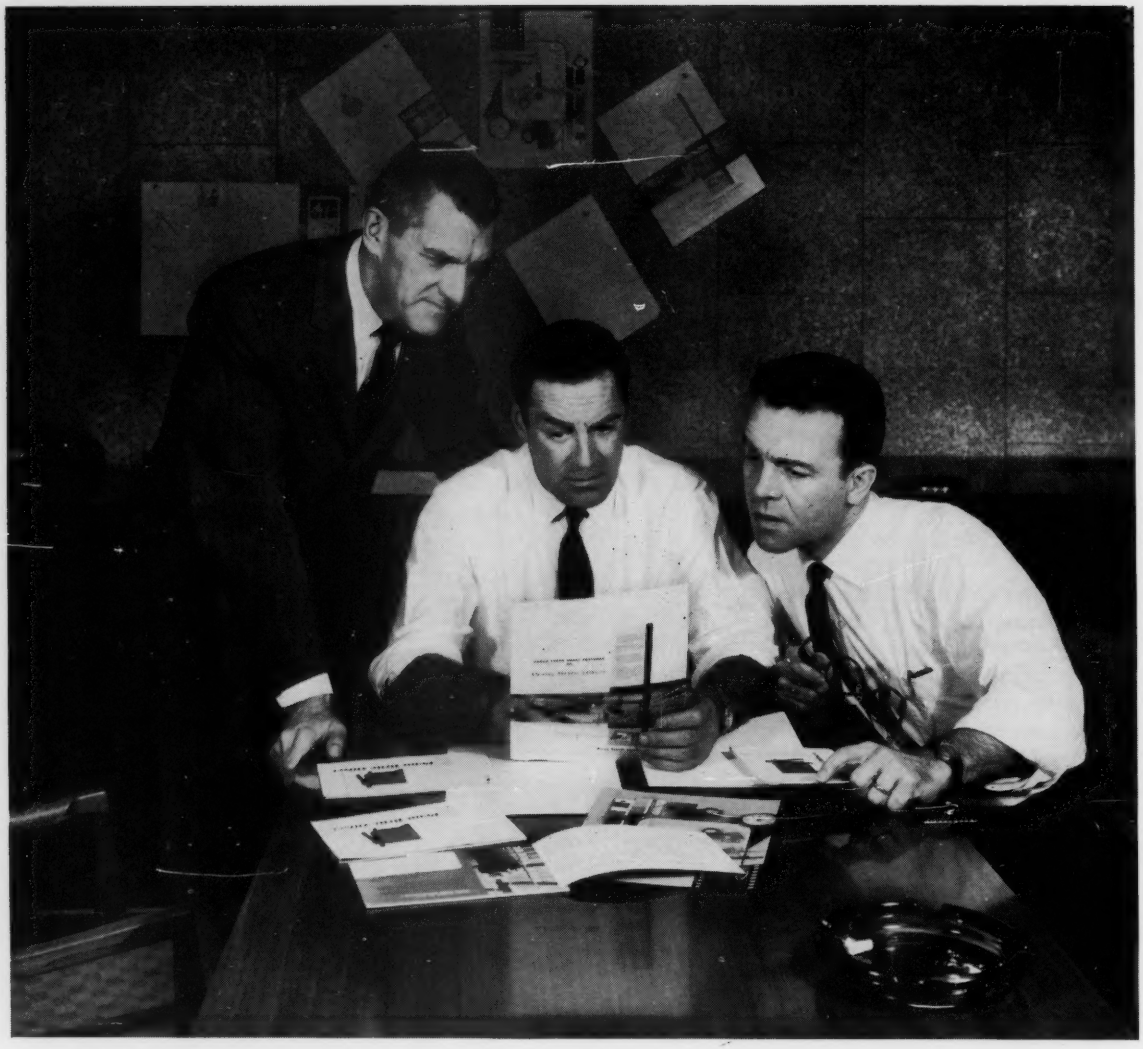
TITLE

COMPANY

STREET AND NUMBER

CITY ZONE

STATE



Paper values . . . and Penn/Brite Offset

The choice *had* to be close. All the possibilities were good offset papers. All, in fact, were better today than they had ever been.

But only one measured up on all four criteria for the job—

Brightness: Exceptional.

Moisturized: Precisely at *all* stages of manufacture to run flat on the press without waves or tight edge.

Printability: An exceptionally smooth surface for fine reproduction of halftones.

Price: Moderate, to meet a budget.

Only one of the branded papers met all these requirements . . . Penn/Brite Offset . . . the value sheet.

If you too have a job requiring quality at a price, it might pay you to examine this fine paper.

More lithographers are using it, and more leading merchants are stocking it, every month. Write today for a swatch book and printed samples. New York & Pennsylvania Co., 425 Park Avenue, New York 22, N. Y.

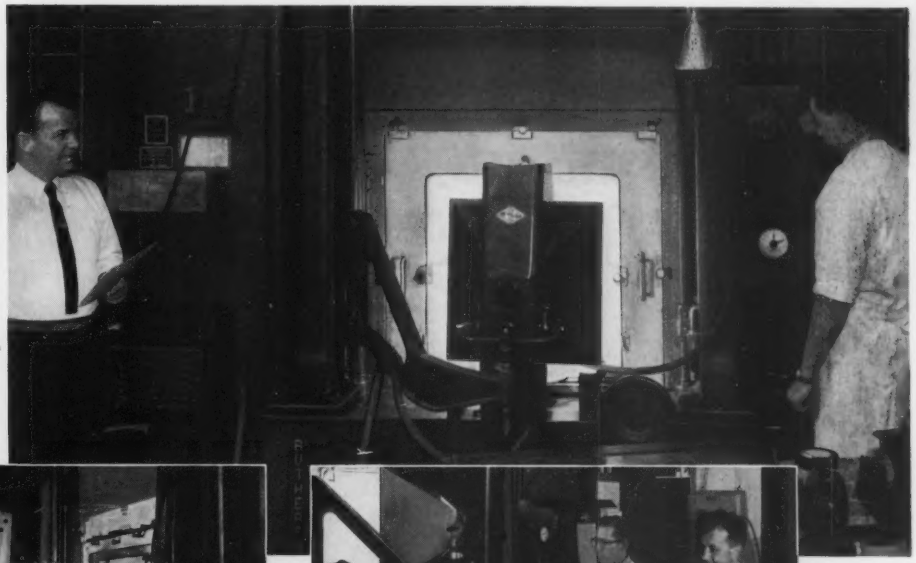
New York and Penn

Pulp and Paper Manufacturers

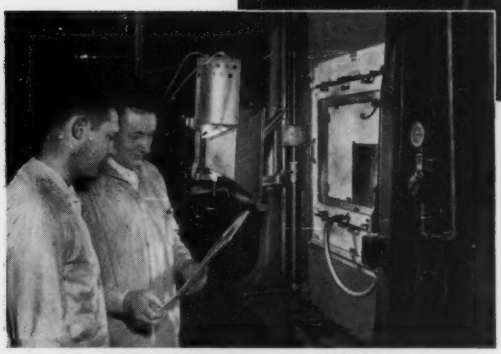
Makers of Penn/Brite Offset • Penn/Gloss Plate • Penn/Print Papers: Eggshell • English Finish • EF Litho • Super • Clarion Papers: Duplicator • Mimeograph • Bond • Tablet

"We like the RUTHERFORD PHOTO-COMPOSER so well we bought *four*!"

says Paul Mueller, President
Mueller Color Plate Co., Milwaukee, Wisconsin



Paul Mueller, left, with machine operator Hank Witte, watches one of company's four Rutherford Photo-Composers in action.



Chuck Konitzer, left, Plate Foreman, and Vlad Sova, Manager of Mueller's Chicago plant examine a step-and-repeat pattern.

Bruce Smith, left, Plate Foreman, checks a job with Ken McLean, Machine Operator, center, and Jack Jardin, Sales Manager in the Milwaukee plant.

August Kopp, left, Manager of Mueller's Battle Creek plant discusses Rutherford Photo-Composer's performance with Bob Rodgers, Machine Operator.

"Our platemaking requires the ultimate in accuracy and precision," says Paul Mueller. "That's why we turned to Rutherford for the kind of photo-composing machines which produce top-quality results consistently."

Here's Paul Mueller's expert testimony: "We appreciate our Rutherford Photo-Composers for the amazing accuracy they give us in our step-and-repeat work. But just as important, we don't have to 'baby' them with a lot of costly maintenance. Our composers are in operation round-the-clock – that testifies to the exceptional stamina of Rutherford equipment."

Take a tip from a man who owns *four* . . . if you want precision platemaking plus the long-run economy and efficiency only quality-built equipment can offer – choose a Rutherford for your next photo-composer.

For full details about a Rutherford Photo-Composing Machine, Precision Camera or other equipment for the graphic arts write, wire or phone today.

Rutherford Machinery Company

Division of **Sun Chemical Corporation** • 401 Central Ave., East Rutherford, N. J.

Branches in Chicago • San Francisco • Montreal • Toronto

Sun Chemical's Graphic Arts Group: GENERAL PRINTING INK *Gravure, Letterpress, Offset Inks and Supplies* GEO. H. MORRILL *Newspaper Inks* BENSING BROS. AND DEENEY *Flexographic Inks* RUTHERFORD MACHINERY *Lithographic Equipment*

PRIDE
IS THE DIFFERENCE

Atlantic Bond

The very finest genuinely watermarked sulphite bond. For easy identification, the substance number is made part of the watermark.

Smoother running . . . sharper, clearer reproduction.

Moisture controlled for dimensional stability. Precision trimmed for greatest accuracy.

Ask your Franchised EASTERN Merchant (or write direct) for a generous sample.

EASTERN
Atlantic Manifest
EXCELLENCE IN FINE PAPERS

EASTERN

EASTERN FINE PAPER AND PULP DIVISION
STANDARD PACKAGING CORPORATION
BANGOR, MAINE

Seeks Sales Information

Dear Sir:

We are making an investigation to compare the development of the American and Swedish printing industries. However, it seems very hard to get any reliable American statistics. As we subscribe to your magazine, we thought that perhaps you would be able to help us.

The information we should like to have is:

1. The breakdown of annual sales volume (latest figures) for:
   a) letterpress (including photoengraving)
   b) lithography
   c) gravure (intaglio)
   omitting printing of newspapers.
2. If possible we would like a breakdown (annual sales volume) of production of different types of printing, such as:
   a) magazines (weeklies, bi-weeklies, monthlies, etc.)

(*Continued on Page* 119)

Meetings

Lithographers National Association, 54th annual convention, The Greenbrier, White Sulphur Springs, W. Va., April 19-21, 1959.

Southern Graphic Arts Association, 38th annual convention and exhibit, Robert Meyer Hotel, Jacksonville, Fla., April 27-29, 1959.

Research & Engineering Council, 9th annual convention, Sheraton-McAlpin Hotel, New York, May 18-20, 1959.

National Association of Litho Clubs, 14th annual convention, Leamington Hotel, Minneapolis, June 11-13, 1959.

9th Annual Southwest Litho Clinic, Dallas, June 13-15, 1959.

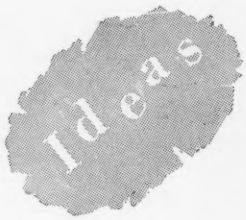
Technical Association of the Graphic Arts, annual convention, Hotel Manger, Rochester, June 15-17, 1959.

Printing Industry of America, 73rd annual convention, Waldorf-Astoria Hotel, New York, Sept. 6-10, 1959.

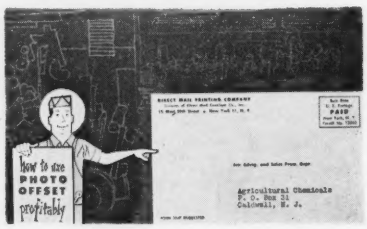
7th Educational Graphic Arts Exposition, Coliseum, New York, Sept. 6-12, 1959.

National Metal Decorators Association, 25th annual convention, Roosevelt Hotel, New Orleans, Oct. 12-14, 1959.

National Association of Photo-Lithographers, annual convention and exhibit, Hotel Muehlebach, Kansas City, Mo., Nov. 18-21, 1959.



Sell Litho



BY this time, it would seem, every printing buyer should know all about lithography—what it is and what it can be expected to do. But that is an unfounded assumption we who are close to the industry too often make. Realizing that the printing buyer may not know all there is to know about offset (may not, in fact, know that offset and litho are the same thing) Direct Mail Printing Co., in New York, recently dispatched a self mailer entitled "How to Use Photo Offset profitably." Enclosed is a return card for obtaining a booklet of that name, which contains "36 pages filled with advertising short cuts and money making ideas." The mailer is a handsome die-cut folder that shows *useful* advertising at its best.

Have you had an idea for a novel use of offset, or have you played a part in selling such a job? If so, why not share your experience with other readers in this column? If response warrants, it will be a regular feature in ML. Please send a sample or photo with your letter.

Printed Offset on Atlantic Opaque • Basis 80 pounds

PRIDE IS A TASTE. A savory broth. Delicately seasoned. Culmination of experiment, care and anticipation. Pride. Made of many things. The force that sets one man's efforts above another's. Just enough. Proud printers have it. Pride. The difference in Atlantic fine papers.

EASTERN Atlantic Manifold EXCELLENCE IN FINE PAPERS

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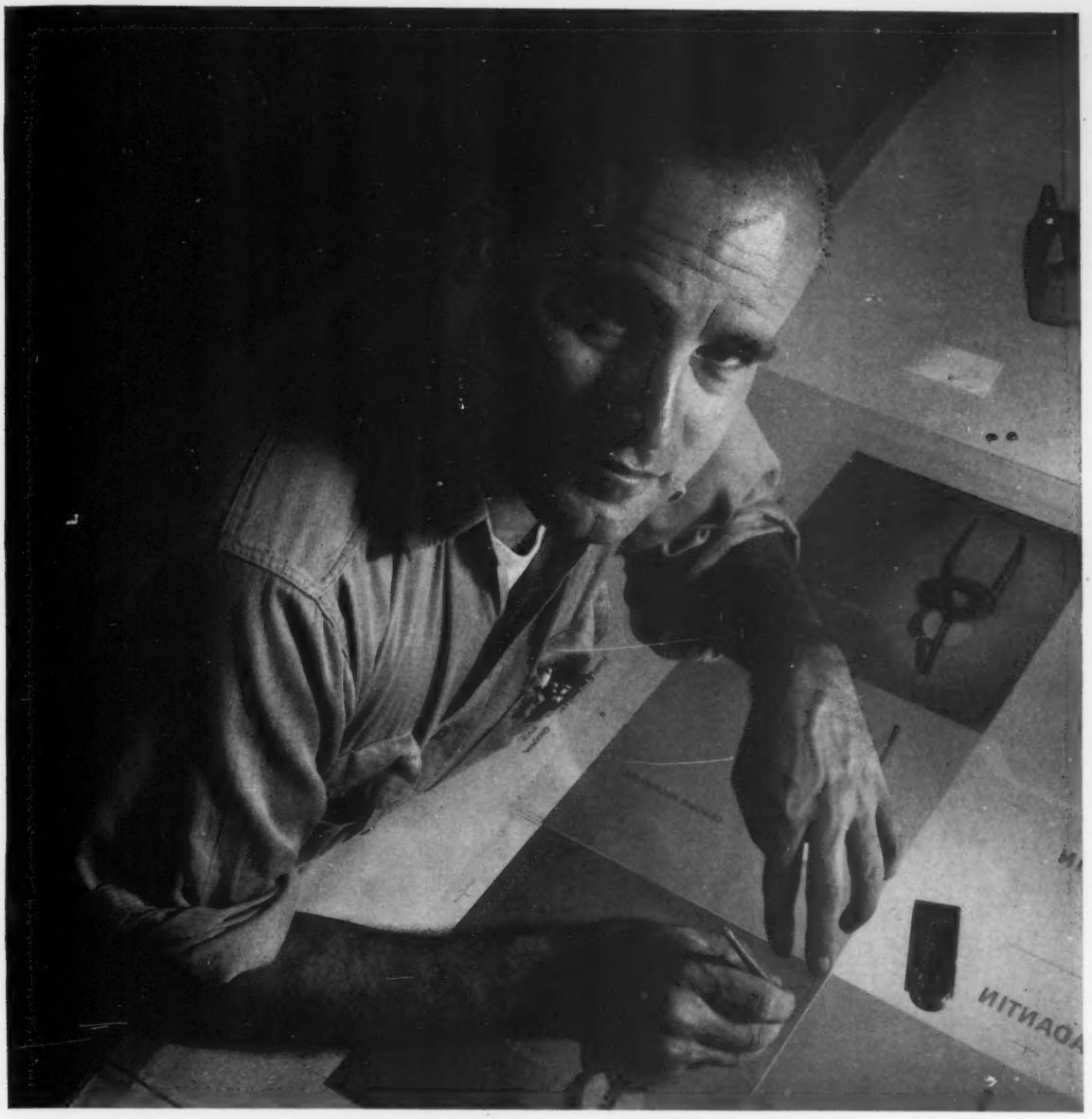
EASTERN FINE PAPER AND PULP DIVISION · STANDARD PACKAGING CORPORATION · BANGOR, MAINE



why do the best men in the shop prefer Ansco?

Because Ansco films have characteristics that can't be matched by any other products.

Ansco superior line and dot formations do mean that significant improvement in plate quality are routine with Ansco materials.

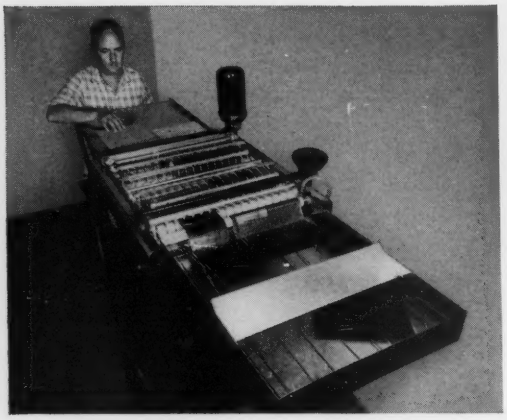
Take Ansco Reprolith Ortho Type C for example. This superb emulsion is designed with perfect orthochromatic balance so desirable where colored copy is involved. In addition, careful filtration saves hours of handwork on the negatives.

Ansco Reprolith Ortho Type C is ideally processed in Ansco Reprodol Developer, a long life, clean working formula specifically compounded for maximum density in both line and half tone work. Try both Reprolith Ortho Type C and Reprodol Developer today. Ansco, Binghamton, N. Y. A Division of General Aniline & Film Corp.

Ansco

Reprolith

Graphic arts negatives developed, fixed and washed automatically with the HALOID LITHOFLO* PROCESSOR



Superb, uniform quality at great savings. Closely controlling the variables of time, temperature and agitation, the Lithoflo Processor *automatically* processes cut sheet film or paper negatives to uniform high quality at exceptionally low cost. Here's why:

- Automatic developing, fixing, washing of graphic arts negatives at speeds up to two and one-half 20" x 25" sheets per minute!
- Greatly improved negative quality!
- Terrific time and chemical savings!
- Increased cameraman production.
- Accurate time, temperature, agitation control.
- Simplified operation.
- Sturdy stainless steel construction.

Ideal for fine-screen reproduction . . . assures uniform dot size automatically.

PROVIDES...

- **Processing time control to ±5%.**
- **Temperature control to ±1°F, when Pako-Temp temperature control or equivalent is installed by purchaser.**
- **Uniform agitation.**

Write for detailed folder.

HALOID XEROX INC., 59-340 Haloid St., Rochester 3, N. Y. Branch offices in principal cities.

HALOID XEROX®

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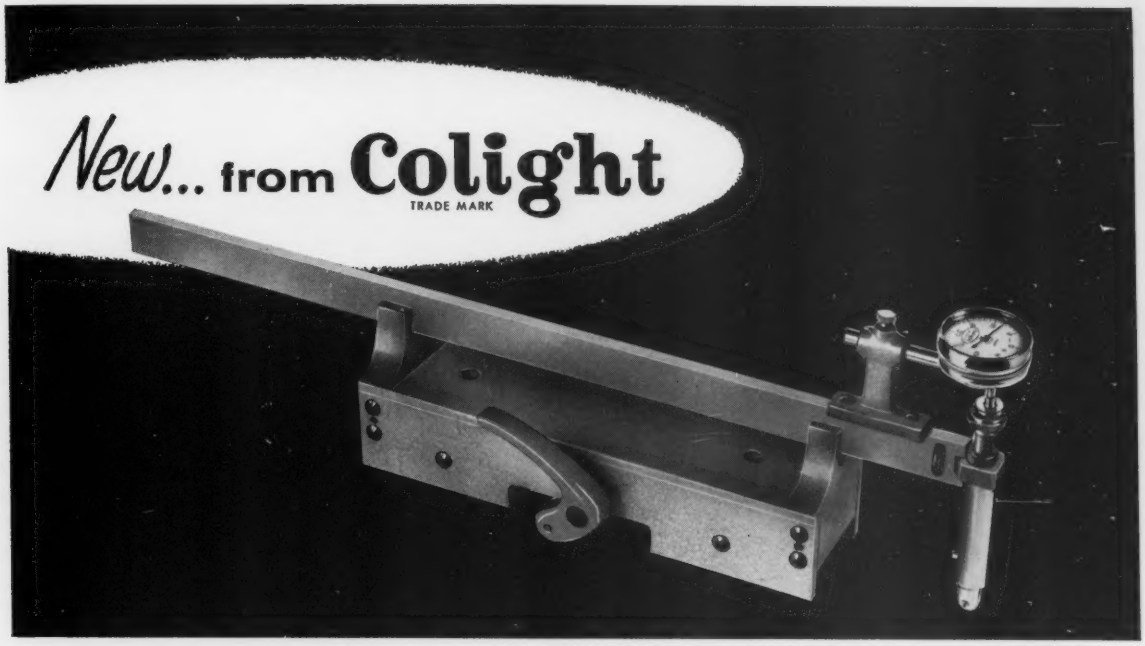


New Magnetic Packing Gauge Gives Better Offset Quality... Longer Plate Life

Now, for the first time, you can scientifically measure the height of the printing surfaces of the plate and blanket cylinders on an offset press. You can do it easily, simply with the Colight Magnetic Packing Gauge, one of the most important technical advances in offset printing in this decade.

The pressure, or "squeeze", between offset cylinders is extremely critical. Too much pressure wears out the plates. Not enough pressure means a poor printing job. And the difference between too much, and not enough pressure is only a *thousandth of an inch*. That's why even veteran pressmen have difficulty in adjusting the cylinders exactly right.

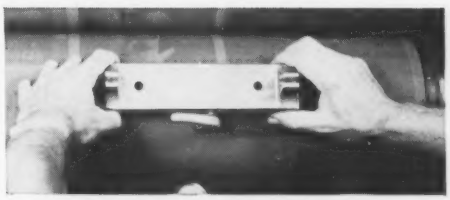
Result: hundreds of thousands of dollars lost every year because of short plate life, and poor quality printing.

You can eliminate this in your plant with a Colight Magnetic Packing Gauge. It's so easy to operate that anyone can quickly measure the height of cylinder surfaces within .001 inch. (see illustrations). And it's portable—you need just one per plant.

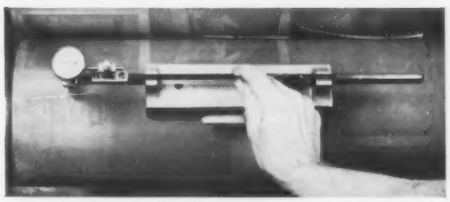
The Colight Magnetic Packing Gauge has been tested extensively. It is being used in some of the nation's best printing plants. (Names upon request.) It is a simple, sturdy, scientific instrument that will give years of maintenance-free service.

Contact your Colight distributor or write for full information. Get the better quality printing—and doubled plate life—that mean more profit for you this year.

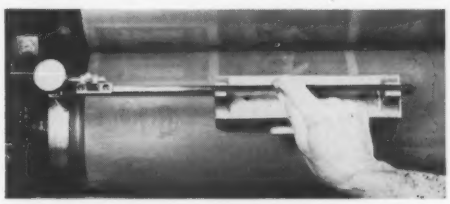
COLWELL LITHO PRODUCTS, INC.
402 CHICAGO AVENUE
MINNEAPOLIS 15, MINNESOTA



1 First step in use of Magnetic Packing Gauge is to place base on blanket cylinder. Powerful magnets seat base firmly.



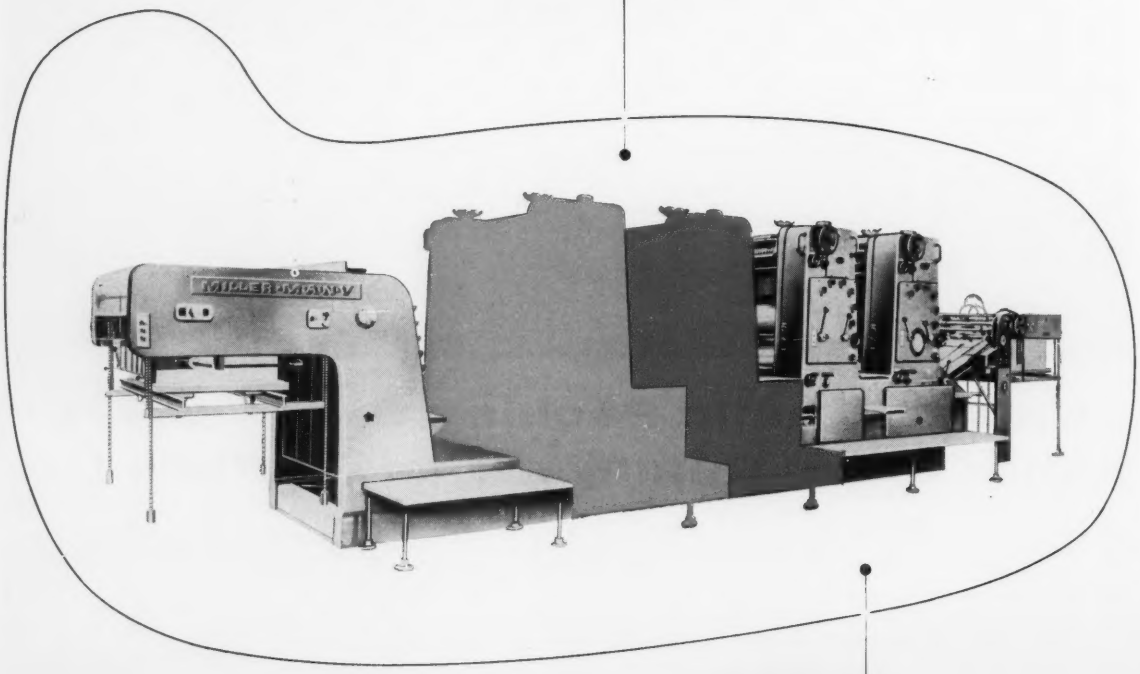
2 Insert bar in base slots, place feeler foot on blanket, and set gauge to "0" point. This gives base height reading.



3 Slide feeler foot to cylinder bearer. Gauge will give height of blanket. Repeat for plate cylinder surface. Total of two readings gives total height, or "squeeze" within .001 inch.

Tomorrow's Offset Press . . .

TODAY!



Precision Engineered and Unitized

MILLER-M·A·N OFFSET PRESSES

Plan for tomorrow's offset press . . . TODAY. As your business grows, expand with the precision engineered Miller-M·A·N Offset Press. Its unit construction will permit you to plan now for the future, since it permits you to convert a two-color press to a three or four color . . . right in your plant and in a matter of a few weeks. Each added printing unit of a Miller-M·A·N is identical . . . no compensation for different ink feed methods is necessary; does not affect press speed nor change in floor loading factor. Let us tell you more about this and other outstanding Miller-M·A·N features.

MILLER-M·A·N IV	MILLER-M·A·N V	MILLER-M·A·N Vi
30 x 42	36 x 48	40 x 56
One to Four Color	One to Four Color	Two to Four Color

★ PERFECT REGISTER AT HIGHEST SPEEDS

★ STREAK FREE OPERATION

★ RELIABLE STREAM FEEDING

★ FINGER TIP ROLLER SETTINGS

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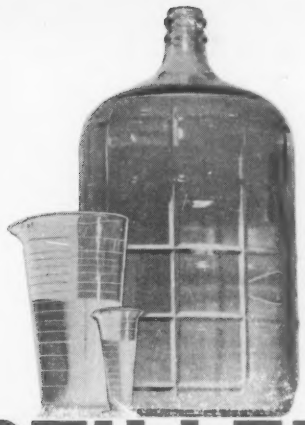
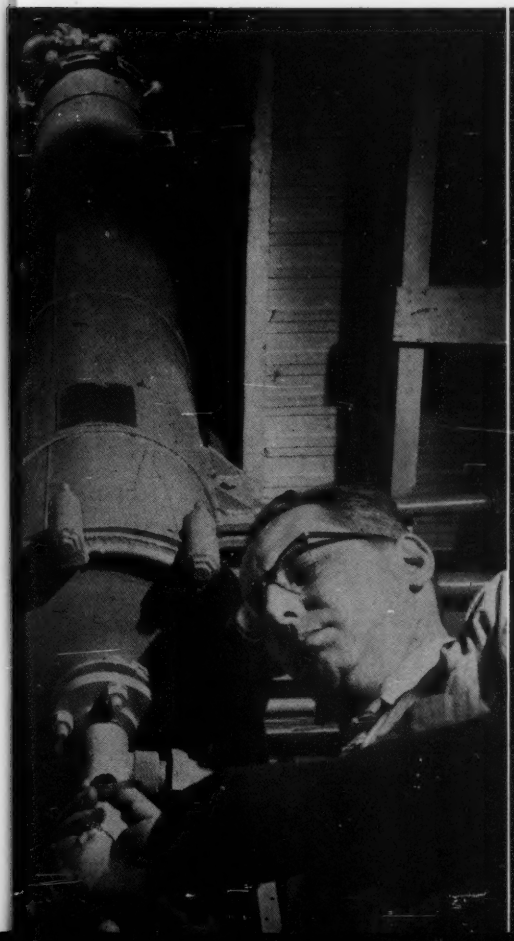


EVEN DISTILLED WATER ISN'T PURE ENOUGH FOR HARRIS CHEMICALS



Harris chemists are probably the world's hardest-to-please. Water, for instance, is passed through ion-exchange equipment until it's three times purer than *distilled* water. These dedicated chemists exert similar "quality control" over all phases of manufacture. Result: pure, stable chemicals that deliver exactly the same performance—job after job, year after year.

Harris Chemicals . . . *the finest.*

HARRIS PRESSROOM CHEMICALS
HARRIS DEEP ETCH CHEMICALS
HARRIS SURFACE PLATE CHEMICALS

HARRIS INTERTYPE CORPORATION

LITHOPLATE, INC.

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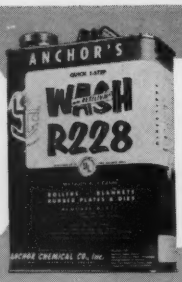
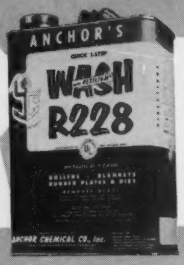
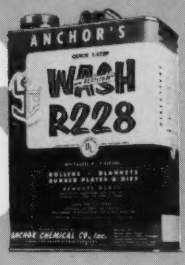
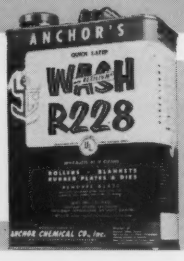
5308 Blanche Avenue, Cleveland 27, Ohio

CONDITIONS CORRECTS CLEANS REVITALIZES









UL LISTED

Would you like to revive rollers and blankets that no longer distribute ink properly?

*Use **VELVEE**, companion product, to remove Gum Glaze*

In one step--at one low cost!

- For the utmost printability over the full life span of *your* rollers and blankets . . .
- For ink distribution that is smooth, uniform and glaze-free on letterpress, offset press, duplicator or proof press . . .
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Use the original 1-Step, 1-Solution WASH R228 with Resilium to remove Ink Glaze

Write for colorful folder today—or order from your nearby Anchor Dealer!

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Offset press performance driving you crazy? If it's paper that has you off the beam, fine quality, double coated Consolidated Enamels will put you back on the right track in a hurry. They're trouble-free because every sheet is double coated on both sides to give you maximum uniformity, greater stability and more pick resistance. They run better . . . print better . . . look better, *yet Consolidated double coating doesn't cost you a penny more.* Ask your Consolidated Merchant for free trial sheets. Make a test run and see for yourself.

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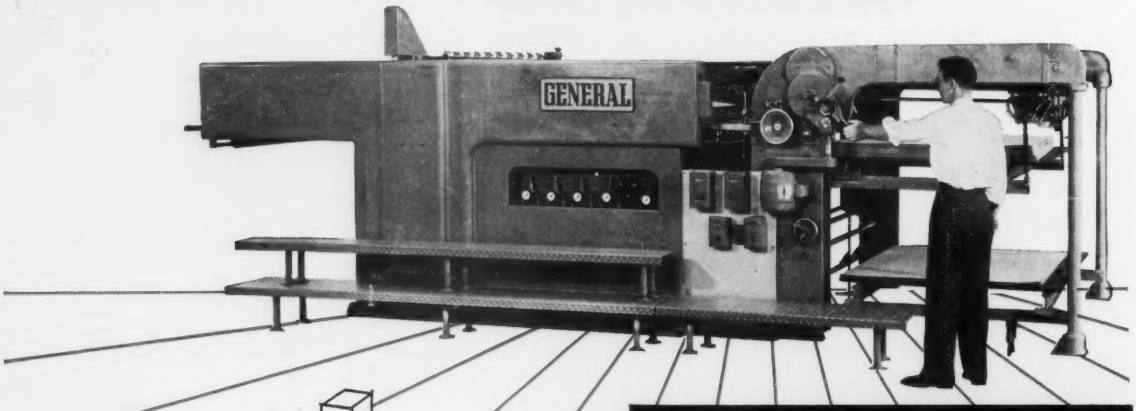

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GRAVURE EFFECTS ON FOIL or plastic, large or short runs, with ½-hour makeready and low plate cost. Now, brilliant colors available . . . clean, flawless coverage.

BRILLIANT FLUORESCENT EFFECTS, only obtainable by screen process, and now available in high speed precision production.

SPOT ADHESIVES . . . all types of adhesives can be printed in substantial thickness in any design for die-cut sheet assembly, remoistening or glitter and flock application, and Cellophane window assembly.

SPOT VARNISHING . . . solid or spot coating with varnishes, lacquers, plastic coatings . . . applied in any design for brilliant surface effects.

FINE TYPE AND GLOSS EFFECTS on inexpensive stock surfaces . . . chipboard, krafts, etc. Stocks from light weight paper and cardboard to B-flute.

The GENERAL 76 handles sheet sizes to 52" x 76" at speeds to 1500 impressions per hr. . . . feeds stock automatically to hairline register. Also 6 other sizes and matching GENERAL THERMO-JET DRYERS, too. Write right now!

from the *largest to the smallest in screen process presses . . .*

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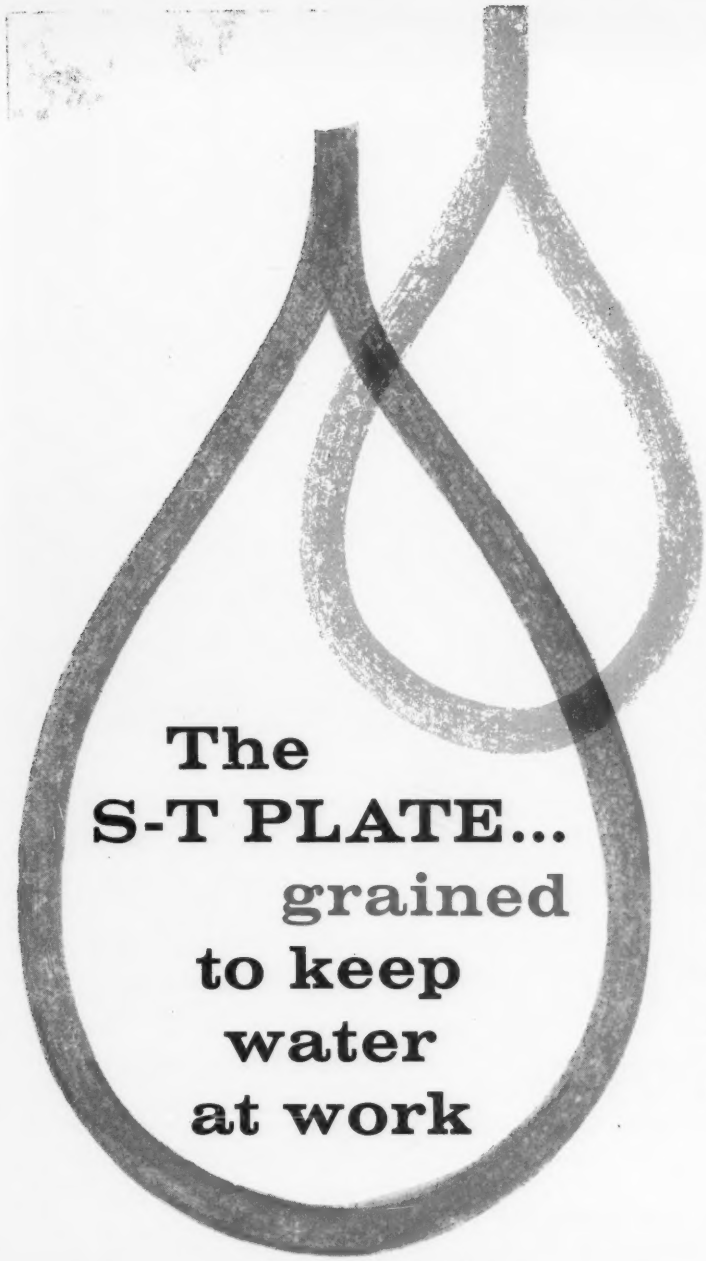

The S-T PLATE... grained to keep water at work

Mechanically grained in precise manufacturing techniques, the S-T plate provides ideal retention of water on the press. The result is trouble-free performance with crisp, quality reproduction on runs of 100,000—and more—impressions.

The S-T Process, including grained plates and specially developed chemicals, is one sure way to control and reduce both platemaking and running time. Less time spent before the presses turn . . . less time wasted when the presses are running . . . are the double assurance that S-T Process helps you keep profits where you want them.

Complete stocks of S-T grained plates and S-T chemicals are now available to meet all press requirements. Check the Pitman office nearest you for complete information and supplies.

S-T Plates are manufactured by Sumner Williams Company; distributed exclusively by the Harold M. Pitman Company.

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Cleveland 11, Ohio—3501 West 140th Street
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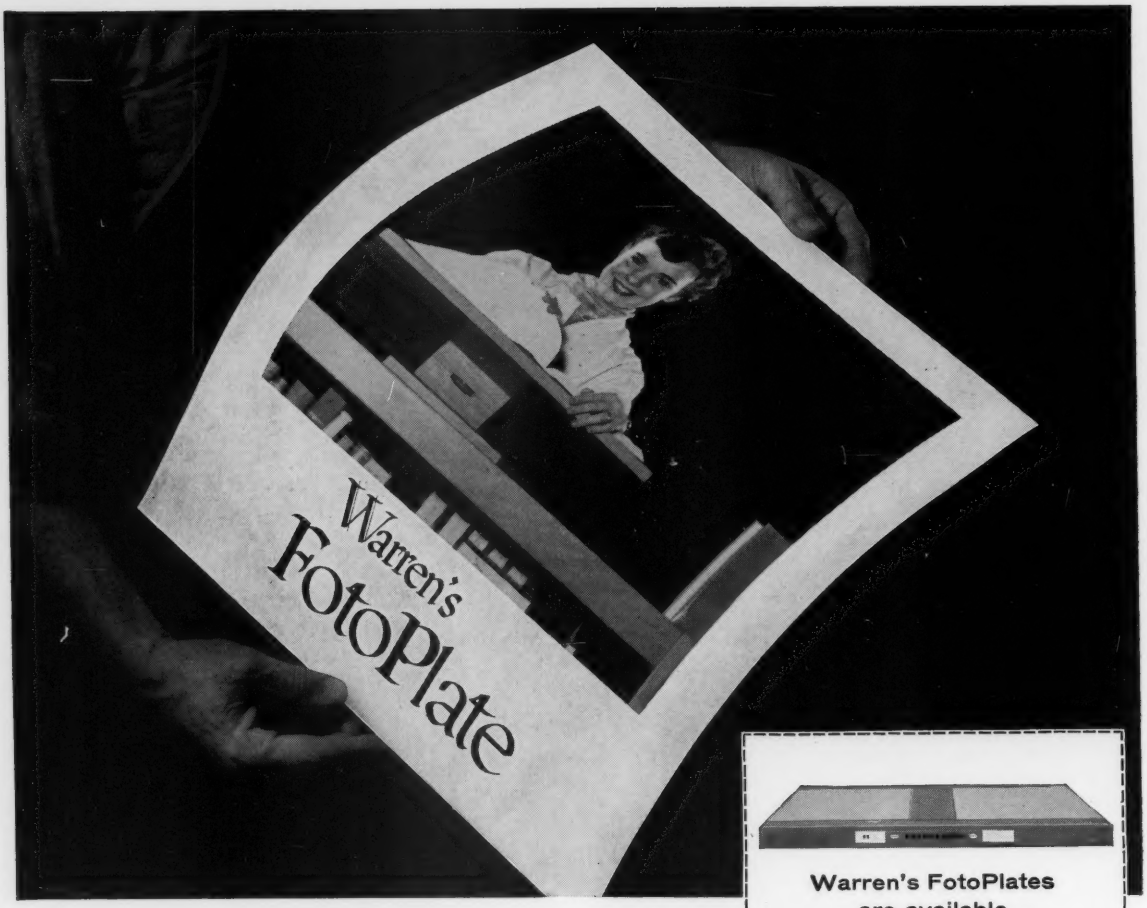


Warren's FotoPlate

(PRESENSITIZED LITHOGRAPHIC PLATE)

GIVES YOU A TRIPLE ADVANTAGE

1. *It delivers the finest reproductions of halftones.*
2. *Does this with economy.*
3. *And does this with speed and ease.*

Warren's FotoPlate possesses excellent dimensional stability. Lithographers like *FotoPlate* because no special technique is required. With *FotoPlate*, more good plates can be made and on press in a working day.

Investigate the advantages of *FotoPlate* for yourself. Get further details and special instruction booklet from any FotoPlate distributor, or communicate with the manufacturer's headquarters: *S. D. Warren Company, 89 Broad Street, Boston 1, Massachusetts.*

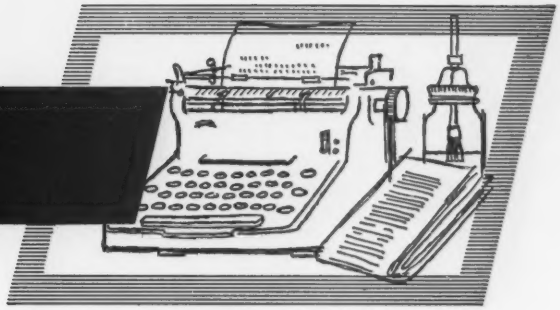
Warren's FotoPlates are available in the following sizes

Twenty-five plates to a package.
Four packages (100 plates) to a carton.

17½ x 16	27¼ x 30
15½ x 20½	26¾ x 31
20 x 22¾	25½ x 36
19¾ x 23	26¾ x 36
19⅞ x 24⅝	29½ x 36
22½ x 30	30¼ x 35
24⅝ x 30	32 x 41
27¼ x 28⅝	32½ x 43

Warren's
HIGH STANDARD

EDITORIALS



Rock 'n' Roll Typography

RHYTHM without melody, in music, is stupefying. At its worst it is rock 'n' roll. Design without legibility, in typography, is just as benumbing. We have noted a disconcerting trend in recent typographic efforts toward complete emphasis on design, with no apparent regard for the adverse effect this concentration of purpose has on readability.

The most glaring example of this trend is the use of words in all capitals, stacked line upon line with nary a whisker of white space between. When this device was first used, perhaps a year ago, it was a startingly fresh idea by a truly creative artist. In its early usage, it was a welcome departure from the hide-bound rules and cliches that long have hampered typography.

But, like other clever ideas, it was copied and recopied, for all sorts of layouts, with color and without, in large type and small, in staggered lines and flush, but always with all caps, and never with any leading between lines. We thought it would all blow over, in due course, but, like rock 'n' roll, alas, it has shown staying power that is as annoying as it is unexpected.

The latest example at hand is (we hope) the *ad ridiculum* of this device, from which point only improvement can be expected. It is—more's the pity—an announcement of a forthcoming graphic arts design contest. The 17 x 10½" announcement flyer, with two folds, boasts (if that is the word) three lines of type in giant caps, an inch and three quarters high, in white against an overall brownish background. In black ink, and obstructed in about one-third of the area by the reverse capitals, is the body type.

Now, as in many such cases, the initial effect is quite stunning, presenting a strong attraction to the eye. And if no one ever had to *read* the flyer, the design could be termed an unqualified success. The unfortunate reader, however, will have such a case of eyestrain by the time he has puzzled through the text that it is doubtful he will be able to focus his attention on the accompanying entry blank (quite handsomely executed, by the way) long enough to *enter* the contest!

Perhaps we state the case a bit strongly, but is it impertinent to ask for a bit more legibility and a bit less design, a bit ". . . more matter, and less art?"

Once Again, Printing Week

PRINTING Week is with us again. From Jan. 11-17, printers of all types—letterpress, lithographic, gravure, silk screen, etc.—will team up in an unaccustomed show of cooperation to tell the general public, and, more particularly, the printing buyer, the many advantages of the printed word.

ML has for years supported this noble venture, and has encouraged individual lithographers and litho clubs to support it too. In some cities, as may be seen from the nationwide roundup elsewhere in this issue, lithographers have contributed much to the increasing success of this yearly promotion.

But the truth is, in too many cities, lithographers and litho clubs have paid little more than lip service to the program. May we suggest, once again, that lithographers who have remained aloof from the PW program give serious consideration—right now—to taking a really positive approach to the 1960 celebration? The results, for our industry, can be quite valuable.★

All new employes must have their hearing checked before starting on the job at the Lord Baltimore Press.

Why Lord Baltimore

Since 1950 *the company has conducted an all-out war on accidents and now has an accident frequency rating much below the national average for printing plants*

New employes get "tuned in" on safety the day they are hired. Here machine shop foreman William Osterhaus (left) talks safety with beginner John Wilhelm.

C. Howard Timanus, personnel director through whose planning and direction the frequency rate dropped to 2.5 from the previous high of 15-18 at the Baltimore combination shop.

Contests and safety programs keep interest in safety high. Safety committee members and supervisors pick up pointers from Clyde Powell, parlor hypnotist and magician.

Is a Safe Place to Work

By *H. H. Slawson*
Chicago Correspondent

LORD BALTIMORE PRESS, well known specialist in the carton and label printing field, has, since 1950, rung up an astounding record of achievement in accident prevention which can well serve as a goal for other printers and lithographers.

Prior to 1950 the company had a frequency rating varying between 15 and 18 each year. This means that, on the average, approximately 16 employes were suffering disabling accidents each year serious enough to cause lost time ranging from a few days to weeks and even months.

More than 13,000,000 work hours later the company, today, proudly boasts an accident frequency rating of 2.5, or fewer than three disabling accidents per year. This compares favorably with the National Safety Council's frequency rate for printing and publishing of 6.50 in 1957; and the U. S. Bureau of Labor Statistics' figure of 9.2 in 1956.

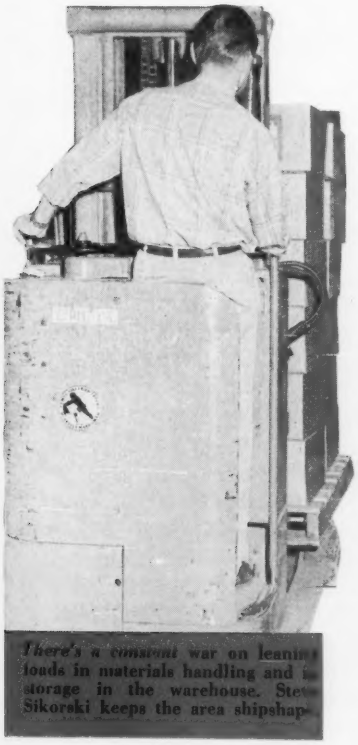
Good Safety Record

Twice since 1950 Lord Baltimore's frequency rate has been exactly zero. This happened first in 1951, when employes worked 1,200,000 hours and the company, in addition, transferred operations from an old building to its present modern plant where nearly 600 employes work. And the zero record was repeated in 1954, when total hours numbered 1,360,000.

All in all, this is convincing evidence that lithographers don't have to get hurt, provided everyone in the company — any company — from the president down to the porter, puts his mind on the problem of avoiding accidents and does something about it.

The turning point in the accident experience of the Baltimore lithographing, letterpress and gravure company came when top management awoke to the realization that the cost of 15 to 18 accidents annually was cutting too deeply into profits. At last October's meeting of the National Safety Council's printing and publishing section, C. Howard Timanus, personnel director, told the story of what

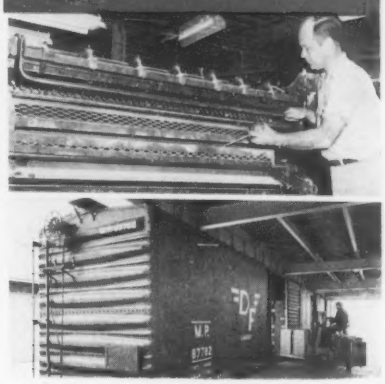
(*Continued on Page* 127)

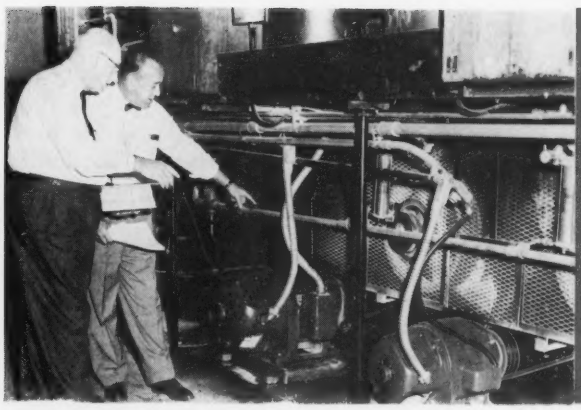


FRONT COVER: *Carton Stripper Ed O'Keefe (left) wears safety shoes and Edna Earnhardt (right) wears safety glasses.*

There's a constant war on leaning loads in materials handling and in storage in the warehouse. Steve Sikorski keeps the area shipshape.

Top: Specially designed guard enables litho pressman Herbert Healy to squirt washup benzene onto five-color press while running. *Bottom:* In rain or snow, covered railroad dock is always dry and safe. Driver has been trained to slow down and blow horn at blind intersections, is forbidden to speed and is instructed to refuse unstable, lopsided loads.





Litho superintendent Thomas Flavell (right) and Mr. Timanus inspect screened guard on the five-color litho press.

Using special lighting and a magnetic blackboard, Color Center director F. L. Wurzburg, Jr., (right) discusses color variations of a proof with (from left) Robert Cleary, Alfred Di Bernardo and Dudley Head of Interchemical Corp. and Maurice Welt of Crafton Graphic. Switchboard controlling Center's six-stage illumination ceiling can be seen below blackboard.

Interchemical Opens Color Research Center

A PACKAGE design looks fine in the artist's studio and in the lithographic pressroom, but how will it look on the supermarket shelf? What light sources should be used to compare original art with printed reproductions? How can we determine the range of colors which can be achieved with a given set of inks?

These are a few of the questions that have plagued the graphic arts and the graphic arts buyer for many years. Remarkable advances in lighting methods since the war have been a mixed blessing. On the one hand, they have increased the amount of light available for viewing and have helped eliminate eye strain. But the increased variety of illuminants, whether they be fluorescent, tungsten or some combination, has served on the other hand to confuse the picture, for what if the buyer views his art work under one light and the printer under another (and perhaps the consumer under still a third)?

IPI Color Center

To provide a basis for answering these questions, Interchemical Corp. last month opened a Color Center for basic research, consultation and information in the field of color. MODERN LITHOGRAPHY and other members of the trade press visited the Center at 432 W. 45th St., New York, Dec. 10. Stewart Hoagland welcomed the visitors and introduced a film on color matching.

The Center will serve not only the Interchemical operating divisions but those indirectly allied to their field of interest. Liaison with scientific societies, industry associations and other groups concerned with the use of color will also be maintained.

Director of the Center is F. L. Wurzburg, Jr., who has been associated with color for 25 years.

Basic research will be conducted on improved techniques for color matching and for establishing color standards and tolerances. In addition, Interchemical's divisions and their customers will be able to consult the Center on basic color theory and its many industrial applications. Similar color information and assistance will be available to advertising agencies, industry associations, and other groups interested in the field of color. A study of color nomenclature is a long-range objective of the Center.

Special Lighting System

Among the special features is a unique lighting system which can produce many of the kinds of illumination used in the appraisal of color. Its use with the Center's precise colorimetric instruments will both facilitate research and help visitors understand some of the basic principles involved in the science of color.

The six kinds of illumination range in color temperature from simulated north sky light (8000°K) to tungsten light (2800°K), the normal incandescent illumination found in the home.

Between these extremes fall overcast north sky light (7400°K), recommended by the Research and Engineering Council of the Graphic Arts for color matching; average daylight (6700°K), approved by the International Commission on Illumination for colorimetry; super deluxe cool white fluorescent light (4500°K), common in supermarkets and retail displays; and color transparency illumination (3800°K), popular for judging the fidelity of four-color proofs against original color transparencies.★

What Happened?

Variations In Photography

explain darkroom mysteries

By Herbert P. Paschel
Technical Editor

Part I

IT'S hard enough for the cameraman in a litho shop to produce perfect negatives every time, even when everything seems to be running smoothly. But when he encounters puzzling, unexplained predicaments that come and go without apparent reason, his job is that much harder. Virtually every cameraman, at one time or another, has encountered situations which seem to defy previous experience and accepted theory.

Let's take a look at some of the predicaments. We will try to find out what can be done to correct them. Just a few of the enigmas faced by graphic arts cameramen are the following:

a. Variable results not attributable to errors in judgment, timing or processing.

b. Inability to carry over proved techniques from one plant to another when changing jobs.

c. Difficulty in establishing standard and uniform techniques for all cameras doing equal work within one plant.

d. Situations where it is impossible to duplicate the results obtained in another plant despite the apparent duplication of all the operations involved.

e. Variations in filter factors or shifts in spectral response.

f. Wide divergence between film manufacturers' recommendations and practical techniques.

Although the human element enters into the problem, the difficulties outlined above are in no way related to incompetence on the part of the operator. Possible explanations must be sought elsewhere—particularly in the performance of the materials and equipment used.

The following are some of the subjects to be discussed in this and subsequent articles:

1. *Behavior of photographic materials contrary to commonly accepted patterns.*

2. *Wide range in camera illumination levels plus non-uniformity of light output.*

3. *Variations in the reproduction characteristics of the optical systems in use.*

4. *Processing errors due to lack of control and limited tolerances.*

Film Response Variables

Photographers have been taught to make two assumptions regarding the behavior of photographic materials. The first is that sensitive emulsions have an inherent and fixed sensitivity to light. The textbooks say so and the film manufacturers further this belief by publishing speed ratings for the guidance of the user. The photographer, therefore, is lead to believe that, having once established a satisfactory exposure condition, he can rely on the film's maintaining a constant response as long as he properly compensates for other variables.

This leads us to the second assumption, commonly known as the "reciprocity law," which states that the photographic result (density, contrast, etc.), will always be the same providing the amount of light reaching the film is the same. Thus, it is assumed that 15 seconds of exposure with 100 units of light on the copyboard will be equivalent to 30 seconds with only 50 light units since; in each case the product of exposure being 1500 light-time units. A variation of the foregoing, with the illumination on the copyboard constant, is to expect identical results by increasing an exposure of 15 seconds at f:22 to 30 seconds at f:32.

These two assumptions have been proved false—especially so with the slow-speed, high contrast emulsions used in line and halftone photography.

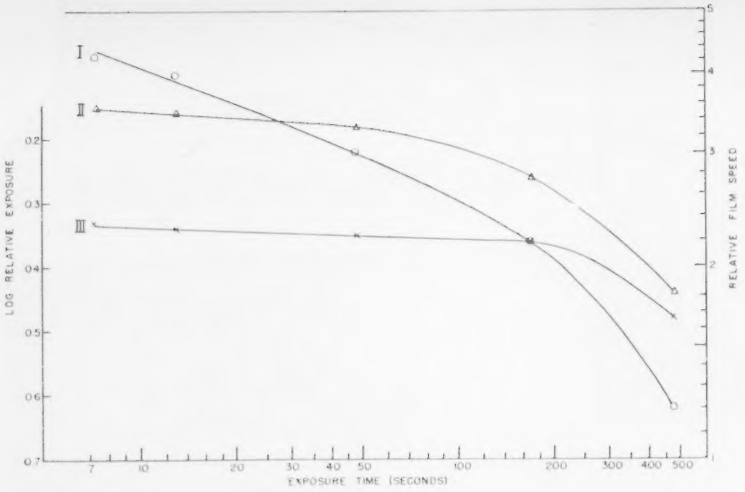
Critical and extensive studies of exposure irregularities reveal that sensitive emulsions vary in effective speed with variations in light intensity and exposure duration. But not all emulsions vary in exactly the same way, or to the same degree. Because of this the "reciprocity law" becomes invalid and resulting exposure errors are said to be due to "*reciprocity failure.*"

On the average, reciprocity failure due to shifts in effective emulsion speed is seldom experienced with continuous tone, black and white emulsions when the lighting conditions are such that exposures range from 1 second to 1/1000 second. But, as fantastic as it may seem, serious reciprocity failure can occur when exposure conditions vary by as little as a factor of 2x with the materials used for line and halftone work.

Reciprocity Effect

The investigations of R. Alfaya* reveal the extent to which line and

*"Reciprocity Failures In Orthochromatic Litho Films." Raymond Alfaya, Photo Products Department, E. I. du Pont de Nemours & Co., Inc., TAGA Proceedings, 1956:69-74.



Reciprocity behavior **of three typical litho films. The curves indicate considerable difference between the films as well as the varying response characteristics of each film.**

halftone materials vary in their response characteristics. The graph shows the reciprocity effect of three widely used litho films. The curves indicate the variation in effective film speed for each of the films throughout the exposure range and point out the considerable difference between the three films. All show a continuous drop in effective speed as the illumination level decreases and the time factor increases. Film III shows fairly stable response characteristics within the seven to 180 second exposure range, after which it drops off sharply. Film II shows a reasonably uniform response range between seven and 50 seconds after which it too tapers off to a lower sensitivity level. But Film I declines in effective film speed throughout the entire range of seven to 500 seconds and reciprocity failure would be most troublesome with this emulsion.

Interpretation of the data represented by the curves explains some of the mysteries encountered by cameramen in their everyday operations. For example, a photographer might try out a new film which is reputed to be faster than the film he normally uses. His tests might show that the new film is even faster than claimed or, to his surprise, considerably slower than his old film. Whichever way his tests turn out depends entirely on the exposure conditions.

Reference to the graph will show how this comes about. Films I and II would produce similar results if exposed under conditions requiring 27 seconds of exposure time at, let us say, f:22. The results would justify considering the two films equal in speed. But if exposed at f:32, for 54 seconds, Film I would be underexposed and thus slower than Film II. Conversely, a 13 second exposure at f:16 would produce results in which Film II would be underexposed and thus rated slower than Film I.

Note also that Film I is faster than Film III up to the 170 seconds exposure point. At that point the two films have an equal response. But beyond 170 seconds Film III is faster than Film I.

When shooting an extremely large size copy the average cameraman would very likely increase the distance between the arc lamps and the copyboard to insure even illumination over the greater area. Because the light on the copyboard is now less than in the normal arrangement, the cameraman knows he must increase the exposure time to compensate. If he calculates this increase in exposure accurately, but happens to be using Film I, chances are that the negative will be underexposed. Most cameramen would attribute this underexposure to some error in their calculations, light fluctuation, processing variation, etc. Very few would realize that under the new exposure condition the film speed has shifted and that the exposure required is much greater than that calculated.

Unexpected Surprises

Let's take another everyday occurence; one that is somewhat more puzzling than the others cited. A cameraman has been using Film III for line and halftone work. On the basis of a comparison test with line copy, he finds Film I considerably faster. So he decides to change over to Film I. When he comes to adjusting his halftone exposures he is faced with some unexpected surprises. The exposure relationship that holds true for line work fails to produce an equal result when applied to his halftone technique.

By trial and error he works out a satisfactory set of exposures. He becomes aware then that not only have the actual exposure times changed, but the ratios of exposures between the three stops have also changed.

The latter is a puzzle to most cameramen and very few ever understand the underlying reason. Actually, the three-stop system represents three different exposure levels. Because of the continual drop in the sensitivity of Film I, as compared to the fairly even response of Film III, a proportional adjustment is not possible.

The reciprocity behavior of litho emulsions is, of course, an inherent quality of the emulsions and is therefore beyond the control of the camera man. Aside from selecting an emulsion that has the least sensitivity shift, the photographer can do little more than make compensations in exposure, providing, of course, he fully understands the response characteristics for different operating conditions.

A cameraman need not consider himself at the mercy of what may appear to be erratic and unfathomable behavior of the sensitive material he uses. Either by sensitometric tests along the lines suggested by Alfaya or by means of simple trial-and-error tests, he can establish the deviation from accepted theory and adjust his technique accordingly.

Having once determined the necessary adjustments, he can rely on them

(*Continued on Page* 109)

NAPL Cost Conference Draws Big Crowd in Philadelphia

PRACTICAL information on cost accounting for the litho shop was forthcoming at a packed conference in the Benjamin Franklin Hotel, Philadelphia, last month. More than 200 representatives of litho shops in the Philadelphia area, including plants from as far away as Wilmington, Baltimore, and central Pennsylvania, attended the all-day meeting Dec. 5, conducted by the National Association of Photo-Lithographers.

(The NAPL advised MODERN LITHOGRAPHY, after the session, that, on the basis of the successful Philadelphia meeting, it would be happy to organize similar meetings in other cities where sufficient employer interest is indicated.)

The morning session was devoted to a detailed examination of a work sheet by Frank R. Turner, Jr., a discussion of sales compensation and markup of outside purchases by Walter E. Soderstrom, and a practical approach to selling by John S. Williams.

In the afternoon, Mr. Turner and three other specialists in cost accounting and selling answered questions from the audience.

Mr. Turner, who is cost accountant for the NAPL, distributed a work sheet to the audience, then analyzed it line by line in an attempt to show how an accurate record of all costs in the litho operation can be used to great advantage by a lithographer.

Among the points he made during his discussion, were the following:

- A recent survey showed that of 70 lithographers interviewed, only 12 had any real knowledge of their costs;
- Most firms use 7½ percent depreciation for new equipment, and 10 percent for old equipment;
- Tax factors vary from city to city and it is therefore important to take them into consideration when analyzing costs;
- While extensive repair costs hit a litho shop infrequently, it is advisable to allow about two percent of total investment cost each year for this factor;
- Normal productive time in the average shop is 75 percent.

Seven Benefits from BHC

Mr. Turner described budgeted hourly costs as only one of three arms of costing, the others being production standards and markup. He listed seven benefits to be derived from a detailed knowledge of costs:

1. Estimating department can do its job more competently with a knowledge of costs;
2. With budgeted hourly costs, it is easy to apply a simple formula to find the monthly sales break-even point;
3. It is possible to determine which

"Get the order and get out!"—Williams

More than 200 in attendance at Philadelphia

"Set up production standards"—Soderstrom

"Keep cost breakdown to a minimum"—Hallstrom

departments are showing a profit;

4. It is also possible to compare the work of individual salesmen;

5. The estimating department has valuable comparative information for use in figuring future quotations;

6. The BHC figures provide a Goods in Process inventory;

7. Analysis of these costs shows the recovery on such items as ink, film, paper, etc. of original purchase costs.

Mr. Turner cited the case of one lithographer who was getting 80 percent of the jobs on which he quoted, and was operating two shifts, but nevertheless was losing money. Mr. Turner pointed out that the lithographer's spoilage was heavy and that his production was spotty.

"It is far better to land 30 percent of the jobs you quote on, using realistic costs, and to make a profit on them than to try for every job that comes along, without regard to costs and to the company's ability to handle the particular type of work," he declared.

If costs are way below the actual figures for the shop, he went on, it is not always possible to boost quotations immediately to the logical point. "But you can increase them gradually, over several months to get them up to where they should be," he added.

Four Trouble Spots

He concluded by listing "four major trouble spots" in costing practices. He said litho shops need (1) A reserve fund for spoilage, (2) Up to date budgeted hourly costs, (3) Production data applied realistically to hourly costs, and (4) Sufficient compensation for salesmen and adequate markup of outside purchases.

"Cut-rate competition," he concluded, "often is simply the result of poor costing."

Mr. Soderstrom, executive vice president of NAPL, reported on compensation of salesmen and markup of outside purchases, using information gained from an NAPL survey. (*For a detailed report of this survey, presented last year at the NAPL convention in Boston, see the October ML, page 35.*)

He urged lithographers to set up production standards in their shops to use in conjunction with budgeted hourly costs.

Concluding the morning session, Mr. Williams, president of the Williams and Marcus Co., considered costs from the viewpoint of the salesman in the litho shop. He observed that in its infancy, lithography from stones was sold as a specialty; when offset was incorporated in the process, it was sold as a cheap means of printing.

"Today there is little difference in cost between offset and letterpress," he asserted, "and offset salesmen must sell quality and specific kinds of work for which the process is suited," instead of price.

In a talk spiced with humor, Mr. Williams went on to make these observations:

- The salesman should analyze the potential of his accounts, and allot his time accordingly;
- He should plan his schedule of calls a week in advance, allowing some flexibility for changes. He should get outside all he can because "not one percent of sales are completed in the office";
- Estimating, by the salesman, "is a time waster." It will take up 50 percent of time that could be spent selling;
- Likewise, the salesman shouldn't spend his time as nursemaid for every job, and should stay out of the plant;
- Salesmen should make at least one "cold call" a day;

A salesman needs to have confidence in his company, and he must be of service to the buyer, not just a price quoter. He should listen more than he talks and when he has the order in his pocket, the salesman should "get the hell out!"

Stanley R. Rinehart, manager of the printing division of DuPont and president of NAPL, presided at the morning session, crediting many lithographers in Philadelphia for help in setting up the program, for which Carl A. Schaubel, of Dunlap Printing Co., was chairman of arrangements.

In the afternoon, Mr. Soderstrom handled the question and answer session. Panelists included Mr. Turner,

(*Continued on Page* 115)

Printing Week—1959

a roundup report of regional celebrations

EXPANDED programs in some cities, deemphasis in others, marks the Printing Week celebration this year, Jan. 11-17. As usual, Litho Clubs are combining forces with Craftsmen, advertising clubs and scores of other organizations in cities all around the country to promote the program.

Each year many new cities join the Printing Week celebration, and most of the old standbys outdo previous efforts by erecting bigger displays, commanding more radio and television time, attracting more notable speakers, etc.

Also as usual, a fine crop of Miss Printing Week's have been elected in virtually every locale celebrating PW. Individual meetings devoted to various phases of the graphic arts are on many agendas, and nearly every city includes a banquet at some time during the week to climax the celebration.

ML has asked its correspondents to supply details of PW activities in various sections of the country. Their reports follow.

•

San Francisco

All groups involved in the promotion of Printing Week in San Francisco have representation on the official committee. The employing printers and lithographers, craftsmen, suppliers, and unions have each designated a representative to serve on the committee.

Chairman is Wayne C. Wade, executive secretary of the Graphic Arts Employers Association.

In San Francisco the industry ranks second in total gross product and income, emphasizing the importance of PW in this area.

Assisting Mr. Wade on the committee are Richard T. Conlan, Charles L. Conlan Printing Company, exhibits; Robert Franklin, Ben Franklin Press, past chairman; Clint Jetmore, Allied Printing Trades Council, special events; Albert Mattson, Bookbinders Union 31-125, awards; S. F. Schoenfeld, Zellerbach Paper Co., publicity; Herman Schunter, W. P. Fuller Co., Craftsmen's Club representative; Al Worner, Security Lithographers Co., banquet; Ernest Withman, Schmidt Lithograph Co., speakers.

•

Twin Cities

Felton Colwell and Edward Strong are co-chairmen in Minneapolis-St. Paul. A banquet at the Prom Ballroom on Jan. 10 will open the celebration. A beauty pageant to elect a queen, open house in printing and lithographing plants, displays and exhibits will follow. Herman Goebel (NALC president) and Leonard Holzinger of the Litho Club are on the committee and will arrange the exhibit.

•

Houston

William T. Clawson, advertising and promotion manager for Harris-Intertype Corp. will be the principal speaker at the annual Printing Week banquet at Elliott's Steak House on January 15. Leon Twiford, chairman of the PW committee, announced that Douglass Hull, Gulf Printing Co., will be master of ceremonies at the banquet.

Other activities planned for the week include exhibits of printing and posters in store windows, open house at several printing plants, selection of Miss Printing Week of Houston, publicity releases to the local newspapers and radio and TV stations.

Celebration of Printing Week in Houston is a cooperative effort involving the Houston Club of Printing House Craftsmen, the Houston Litho Club and the Printing Industry Association of Houston.—*J. V. Burnham.*

•

Hartford

Mark Twain and his little-known brush with fame in the printing world will be the theme of Printing Week in the Hartford area. Promoting the week as a joint effort will be the Graphic Arts Association of Connecticut and the Hartford Club of Printing House Craftsmen.

Highlight of the week will be the windup of a campaign to install Mark Twain's original Paige Typesetting machine in the Mark Twain Memorial —his home when he lived in Hartford. The machine has been permanently lent to the Mark Twain Memorial by the Mergenthaler Linotype Co. Funds to move the bulky equipment are being raised by the Printing Week sponsors.

Twain's typesetting machine, instead of making him a rich man, caused him to lose an amount of money estimated at $300,000 when it never quite lived up to expectations.

•

Detroit

Big things are planned in Detroit. Helping to celebrate the 254th birthday of Ben Franklin, this city has booked the Veteran's Memorial Build-

ing for its annual banquet. The Litho Club is joining with other organizations in scheduling four nightly dinners, advertising PW on radio and TV, awarding a scholarship of $500 and selecting Miss Printing Week.

•

New York

Eric Johnston, President Eisenhower's special ambassador to the Middle East and president of the Motion Picture Association of America, has been selected to receive the 1959 Franklin Award of the New York Employing Printers Association.

Mr. Johnston will accept the award and make the principal address at the annual Printing Week dinner on Jan. 12, at the Commodore. He was president of the United States Chamber of Commerce from 1942 to 1946 and has been called upon by three presidents to perform services for the federal government, including membership on the War Manpower Commission, Defense Mobilization Board and Inter-American Development Commission. He was administrator of the Economic Stabilization Agency, and is currently chairman of the International Development Advisory Board.

Mr. Johnston recently returned from Russia where he negotiated with high Soviet officials for the exchange of American and Soviet films. He is considered one of the best informed and most articulate spokesmen for the American economic system.

Sharing the Printing Week spotlight with the award dinner will be the 17th Exhibition of Printing, sponsored by the New York Employing Printers Association, which will occupy the East Ballroom of the Commodore Jan 12-15. Nearly 1,000 pieces of printed matter produced in the New York metropolitan area during 1958 will be on display each day from Noon to 10 p.m.

Official ceremonies marking the opening of Printing Week and honoring Benjamin Franklin will be held at New York's City Hall on the morning of Jan. 12. An "added attraction" of the forthcoming Printing Week in New York will be an open house at the new building of the New York School of Printing on Thursday. All members and customers of the New York printing industry will be invited to tour the building which has recently been completed and placed in operation. The all-day open house will be followed by evening ceremonies marking the formal dedication of the new building.

Other events of Printing Week in New York will be a series of evening informational workshops for users of

Eric Johnston, who will be honored in New York PW program.

printing, to be held in Rooms B-C of the Commodore at 7:30 p.m. on Jan. 13-15.

The workshop on Jan. 13 will feature a review of the printing exhibition by members of the board of judges. It will be co-sponsored by the Advertising Agency Production Club of New York and the Associated Printing Salesmen. On Jan. 14 a program will be conducted by the Sales Promotion Executives Association of New York. Each workshop will be preceded at 6 p.m. by the showing of films on graphic arts processes and products.

Printing Week is sponsored by 65 organizations in the advertising, publishing and printing industries.

•

Los Angeles

"Printing Makes the Lasting Impression" is the slogan for the Southern California celebration of Print-Week, according to Ray Prochnow, general chairman for the event.

The entire program is geared to one purpose . . . making printing buyers and potential printing buyers realize that in the field of advertising and communications, where all expenditures must be carefully scrutinized, printing is the number one means of communication.

"We expect to wage two coordinated campaigns to carry out our theme of 'Printing Makes the Lasting Impression'," Mr. Prochnow said. "One will be directed to the public to urge greater use of the graphic arts in everything from businessmen's cards to the housewives' personal stationery.

"The other will be directed at decision-making groups and individuals to educate them to the economic advantages of using printing to communicate ideas and sell products," Prochnow said.

The committee also will stress that 87 percent of what people learn is by visual perception, and that only printing gives the lasting visual impression.

Also on the PW program is "Graphic Arts In Action," Smart Supply Co.'s annual four-day trade fair, which has been moved up to coincide with other Printing Week activities.

Graphic Arts In Action, Jan. 14-17, will bring a big array of new machinery and processes to California, according to R. A. Greene, president of Smart Supply Co.

"It is our plan this year to have every exhibit a 'live' working demonstration, with factory representatives on hand to show and explain their products," he stated. "New models and many products never shown before west of the Rockies will be presented."

A novel darkroom in which technicians may work undisturbed while spectators watch from outside; improved methods and chemicals for powderless etching; faster, better methods of reproduction — including semi-miniaturization of engineering drawings will be among the noteworthy features, Mr. Greene added.

The event, which brings visitors from neighboring states as far as Texas, will be held daily from Noon to 10 p.m., and 10 a.m. to 6 p.m. Saturday, at 810 East Washington Boulevard.

Cincinnati

William Staudt, Young & Klein Lithographers, is co-chairman with James Macke, Macke Bros., of the PW celebration in Cincinnati. Mr. Staudt, a leader in the local Litho Club and the National Association of Litho Clubs, reports that Miss Judy Biddle will reign as queen of Printing Week. She is the daughter of Harold Biddle.

•

St. Louis

Under the leadership of the St. Louis Club of Printing House Craftsmen, St. Louis printers and lithographers will visit Beaumont Art Studios, and Christian Board of Publication at 6 p.m. Jan. 12 and 13. Miss Printing Week, chosen in a contest among candidates representing various branches of the graphic arts industry in St. Louis, will act as hostess at each plant tour. She will receive a $25 award at the annual printing week banquet in the Coronado Hotel Jan. 14.

The O'Fallon and Hadley printing schools are competing for the "Best Student of the Year" award, and a second award for the best menu design. The outstanding student will be judged for his individual work, his attendance, improvement during the year, and his personal appearance. The best cover design submitted by a student will be used on the Printing Week banquet menu. Prize winning students and their teachers will be guests at the banquet.

The Graphic Arts Association is planning a joint luncheon with the Advertising Club on Tuesday.

Exhibits of printed material from this and other areas will be on display throughout the week in the exhibition hall of Stix, Baer & Fuller, department store, and in the lobby of the Central branch of the public library.

Warren Wipperman, Garrison-Wagner Printing Co., is PW chairman.—*Mildred Weiler.*

•

Milwaukee

Milwaukee's Miss Printing Week this year is Miss Kay Ellen Rauch, who was sponsored by the National Industrial Advertisers Association. She was selected from a field of 11 candidates on Dec. 10. Announcement of the winner and her court of four was made at a press luncheon Jan. 7 in the Capital Terrace restaurant.

Members of the Court of Honor are Elaine Ullrich, Wisconsin Industrial Editors Association; Carol Scheiding, Milwaukee Advertising Club; and Sharen Phalin, Milwaukee Litho Club.

In Milwaukee, Printing Week is a week-long series of events sponsored

Miss Kay Ellen Rauch, Milwaukee PW Queen, and judge Robert Buntrock.

by 17 organizations, each of which is entitled to nominate one girl to be Miss Printing Week. The winner is introduced at the banquet and will make radio and TV appearances.

The banquet, on Jan. 17, will be held in the Schroeder Hotel. A private reception will be held at 6 p.m. in the Pere Marquette room for the speakers, Miss Printing Week and her court, presidents of sponsoring organizations and Printing Week committee members.

A new feature of PW this year is a day-long Graphic Arts Workshop, which will be held Saturday from 9 a.m. to 3:30 p.m. at Custer High School, for students and teachers interested in the graphic arts. The Workshop is designed to give professional advice on the editorial and technical preparation of high school annuals and newspapers.

Letters with enclosures of career information and Printing Week posters

(*Continued on Page* 119)

Litho Schools

Canada—Ryerson Institute of Technology. School of Graphic Arts, 50 Gould St., Toronto, Ont., Canada.

Chicago—Chicago Lithographic Institute, 1611 W. Adams St., Chicago 12, Ill.

Cincinnati—Ohio Mechanics Institute, Cincinnati, Ohio.

Cleveland—Cleveland Lithographic Institute, Inc., 1120 Chester Ave., Cleveland 14, Ohio.

Los Angeles—Los Angeles Trade Technical Junior College, 1646 S. Olive St., Los Angeles 15, Calif.

Minneapolis—Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.

Minneapolis Vocational High School, 1101 Third Ave. South, Minneapolis 4, Minn.

Nashville—Southern School of Printing, 1514 South St., Nashville, Tenn.

New York—New York Trade School. Lithographic Department, 312 East 67 St., New York, N. Y.

Manhattan School of Printing, 72 Warren St., New York, N. Y.

Oklahoma—Oklahoma A & M Technical School. Graphic Arts Dept., Okmulgee, Okla.

Rochester—Rochester Institute of Technology Dept. of Publishing & Printing, 65 Plymouth Ave., South Rochester 8, N. Y.

Philadelphia — Murrell Dobbins Vocational School. 22nd and Lehigh, Philadelphia, Pa.

Pittsburgh—Carnegie Institute of Technology School of Printing Management, Pittsburgh.

San Francisco—City College of San Francisco. Ocean and Phelan Aves., Graphic Arts Department.

St Louis—David Ranken, Jr., School of Mechanical Trades, 4431 Finney St., St. Louis 8, Mo.

Vancouver—Clark College.

West Virginia—W. Va. Institute of Technology. Montgomery, W. Va.

Trade Directory

Lithographic Tech. Foundation
131 East 39th St., New York 16, N. Y.

National Assoc. of Photo-Lithographers
Walter E. Soderstrom, Exec. V.P.
317 West 45th St., New York 36, N. Y.

Lithographers National Association
Oscar Whitehouse, Exec. Dir.
1025 Connecticut Ave., N.W.
Washington, D. C.

National Assn. of Litho Clubs
Frederick Shultz, Sect.
Buckbee Mears Co.
Toni Building
St. Paul 1, Minn.

Printing Industry of America
Bernard J. Taymans, Mgr.
5728 Connecticut Ave., N.W., Washington, D.C.

Internatl. Assn. Ptg House Craftsmen
P. E. Oldt, Exec. Sec'y.
Room 307; 411 Oak St., Cincinnati 2.

Maurice Blacker, production superintendent at Hub Offset Co. Boston lithographers for the trade, examines a press sheet printed on Davac R in his shop.

Davac Label Paper

In September, 1957, a survey by MODERN LITHOGRAPHY *to determine the special problems of label lithographers unearthed some interesting comments from readers. The survey showed much misinformation on the part of label lithographers. It showed, too, that many of these lithographers were not aware of all the improvements in the field. To shed some light on the subject, ML has scheduled a series of articles on recent improvements in label paper for lithography, of which this article on Nashua Corp.'s Davac is the first.*

A RELATIVELY few offset shops account for the major portion of lithography on label paper in the United States. In recent years there have been many newcomers to the field, but, by and large, it is still pretty much of a speciality.

The reasons are not far to seek. Ask any lithographer why he doesn't enter this field and he'll very likely make the comment that he has worries enough as it is, without looking for more trouble.

To a certain extent, of course, his fears are justified. But several important improvements in label paper have made the lithographer's job much easier than it ever was before. Established label printers have learned this, but the average lithographer, out of touch with this segment of the industry, often has not.

One question in ML's 1957 survey of label lithographers (September issue, page 46) asked "Is it more difficult to print on the gummed than the ungummed side of the (label) sheet?" Many lithographers thought we were pulling their legs on this one. A large number put question marks in the answer space, several said "it can't be done," and one merely quipped "Are you kidding?"

Apparently many label lithographers are not aware that Nashua Corporation's Davac has so many improvements. With reasonable care, Davac has been printed on the adhesive side by offset as well as letterpress.

Prior to this development, one of the principal objections to the use of great quantities of pre-gummed papers in the graphic arts, packaging and allied industries was the tendency of gummed paper to curl, distort, lose its adhesive qualities or crack within a relatively short length of time when exposed to normal atmospheric conditions.

In addition, the presence of the dampener on the offset press added one more problem that almost always caused trouble. The distortions which were common to water-moistenable label papers of the past sometimes occurred during transit, storage or further processing by printers and other consumers. Quantities of finished labels were ruined, because of abnormal atmospheric conditions, before the label products were actually ready for use.

During this unhappy period, industry-wide research was initiated to develop an adhesive which would not cause gummed papers to distort or in any way lose their adhesive qualities. Nashua Corp., Nashua, N. H., was one of the first companies to be committed to this research. Austin E. Davis, chemical engineer and research man for Nashua, for whom the paper was eventually named, worked for years to perfect a new adhesive coating formula. Meanwhile, in Canada, a chemist by the name of Pryor was working along similar lines. For a variety of reasons he had to abandon his work, and in 1954 sold his developments to Nashua, where they were incorporated in Mr. Davis's work. A patent on Davac was applied for in May, 1954 and granted in May, 1957. The company terms it the first major development in the gummed paper industry in 25 years.

What are the specific advantages

(*Continued on Page* 127)

Part 1 of a New Series:

Web Offset

By John B. Scouller
Camden, Ark.

WEB-OFFSET has experienced tremendous growth in the last 10 years. New press manufacturers have entered the field; many improved presses have been engineered and installed; new applications for web-offset have been discovered; and most important, lithographers are making money with web-offset equipment.

Web-offset itself is not new. Soon after sheet-fed presses were in commercial use, roll-or web-fed presses came into being. In 1906 the John Waldron Corp. made an early installation. In 1914 the Scott Press of Plainfield, N. J. made a perfecting web-offset press for the Schirmer music publishers. But the man who is considered the father of modern, high speed web-offset presses is John F. Webendorfer.

After selling out his gravure press manufacturing business, he invented and gave his name to a line of small, economical sheet fed offset presses. One of his customers wanted to buy several of these presses for the printing of movie program fliers. Mr. Webendorfer persuaded this customer to buy a roll-fed press instead, on a money back guarantee.

John F. Webendorfer, **one of the prominent early developers of web-offset equipment.**

A business forms press followed. Soon Mr. Webendorfer was building larger sizes for newspapers. In 1938 he joined the American Type Founders Co. and ATF Webendorfer became a famous name in web-fed equipment. It has probably built more web-fed offset presses than any other organization. The number is estimated at 750. Many of these early Webendorfers still are in use today.

Problems Prevented Boom

But web-offset didn't immediately boom. A few lithographers saw the potential of high speed printing of a web of paper coupled with the many advantages of offset, especially for standard sized products. But offset itself had certain problems which had to be solved before the process could become widespread. Printing from a web of paper at high speeds instead of from sheets at low

This series of articles on web-offset is directed primarily to the many printers and lithographers who are considering purchase of a web-fed offset press or are interested in this type of printing. Although many specific answers and suggestions are given, the articles are not intended to be solutions to technical problems that the present web-offset owner might be experiencing. Technical assistance from press manufacturers, supply houses, ink suppliers and paper people as well as from the Web Offset Section of the Printing Industry of America is available for these technical questions. It is hoped, however, that these articles will be of both interest and assistance to that large group of lithographers who desire elementary knowledge of web-offset in order that they may better decide if they should go into it.

The author is a graduate of Carnegie Tech's School of Printing Management. After a year with Doubleday and Co. he was called into the service to be officer in charge of a mobile printing unit with the Psychological Warfare branch of the Army. This company was equipped with a two-unit ATF Webendorfer web-fed offset press mounted in a semi-trailer. He is currently with a lithographer in the Southwest who has just installed a two-unit web-offset perfecting press for publication work.

speeds presented additional problems and temporarily limited the growth of web-offset.

Since the second World War, offset has grown and prospered. Much of this growth has been due to the research of the Lithographic Technical Foundation. Better, more dependable plates have been developed. Inks and paper have been improved. Offset has changed from a second rate process of cheap, gray printing on uncoated stocks to a process capable of holding its own in quality and price against both letterpress and gravure.

Growing along side sheet-fed offset was web-offset. Web presses were strengthened and their design improved. Inks that could be dried by heat were developed. This meant that the web-offset printer was no longer restricted to those papers which would blot up the ink. Color separation which required less hand work was perfected and conversion techniques were improved. Bi-metal and long run copperized aluminum plates were placed on the market. These were ideal for the web printer because web-offset is most economical on long runs. With these plates the web printer was able to complete his long runs with only one set of plates without deterioration of the image. The paper makers came up with special coated papers made to run well on the high speed web-fed offset presses and compatible with heat set inks and ovens. Finally, the discovery that the cheap machine-coated letterpress papers could be run successfully on web-offset equipment opened the coated publication market to web-offset.

These developments and others like them have alerted many printers and lithographers to the advantages of web-offset. To fill the demand for equipment, the press manufacturers have engineered presses which range from small jobber units which print letterheads to giant multi-color perfecting units which both print and fold publications and books. Whatever your requirements, there is a web-offset press available which can produce your product at a saving, or a web press builder who is willing to custom build a press to produce your product.

Two General Types of Presses

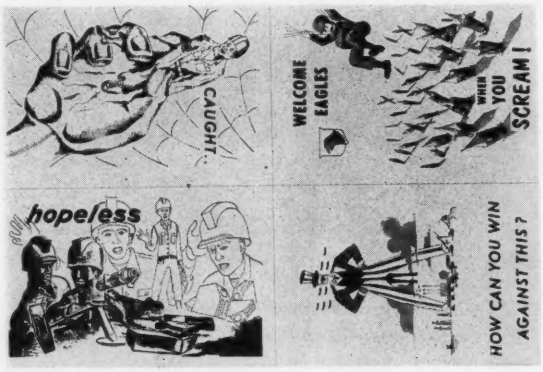
Web-offset presses can be divided into two general categories. First there is the press specially designed for a particular product. This kind of press is a manufacturing machine with very little flexibility but with tremendous production capacity. The second class of web-offset presses is the multi-purpose standard press, built to traditional sizes and specifications. They range from small color and business form presses to the larger publication units. Although many of these presses are used to produce a standardized product and thus eliminate the additional cost of engineering required with a custom built press, they still have the flexibility needed to produce many different types and sizes of products, if necessary.

But it must be remembered that web presses in general are not as flexible as sheet-fed presses. A web press has a limitation as to the narrowest and widest web which it will take, just as a sheet-fed press has maximum and minimum sheet limitations. But unlike a sheet-fed press, a web-offset press always has one fixed dimension. This is the circumference of the printing cylinder, which usually determines the cut-off of the web, although it is possible to design a press which will cut the web at some fraction or multiple of this cylinder circumference.

You must live with this fixed dimension and plan around it. To fail to do so will produce waste. The savings expected with a web-fed press will be reduced if not eliminated. This naturally imposes an important restriction on the use of web presses for commercial work.

The custom built web-offset press imposes other restrictions. This type of press is designed around one or more products. This may mean that only small changes were made to a standard web press, or it may mean that a completely new press was designed to produce the product.

An example of how a press is built around an end product can be illustrated by the development of the small psychological warfare presses which Mr. Webendorfer developed for the Army. The Army had standardized, in World War II, on a propanganda leaflet for-

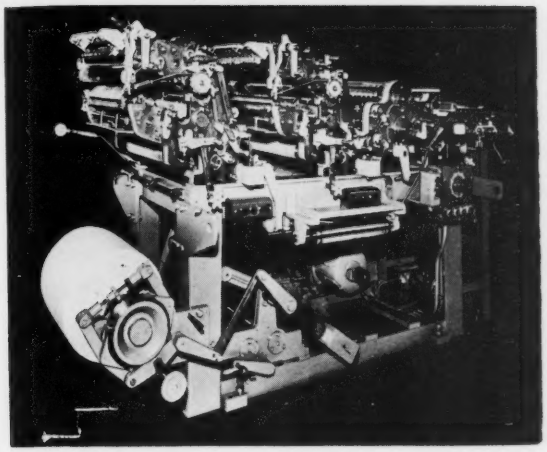


Typical sheet **printed by the two-unit PsyWar press. This web-offset press is rated at 30,000 i.p.h., producing 120,000 individual 5¼ x 8" leaflets.**

mat of 5¼ x 8". These leaflets were being printed by offset duplicators. But modern warfare required quantities of leaflets which were far beyond the capacity of duplicators. A small, high speed web-offset press designed to fit into a semi-trailer and sturdy enough to be moved with the advancing army was designed around this leaflet size.

Twice the length of the leaflet gave 16", which became the width of the roll of paper, or the web. Twice the width of the leaflet was 10½" which became the circumference of the printing cylinders and also the circumference of the cut-off cylinder which cut the web into sheets. Thus a press with a 10½" cylinder and capable of handling a maximum web of 16" was designed. In order to print two colors, two printing units were used. To divide the sheet into individual leaflets, two perforating devices were installed adjacent to the printing units. The sheets could then be taken in handfulls and torn apart with ease. This eliminated the need of a flat cutter.

On one end of the press a device to hold and control the rate of feed of the roll of paper was installed. On the



Two-unit **custom built PsyWar press before it was installed in a semi-trailer. Designed to print two colors on one side or one color on both sides of the web, this speedy press produces a 10½ x 16″ newsheet, or 8 x 10½″, 5¼ x 8″, 4 x 5¼″ leaflets for support of front line troops.**

other end a sheeter was provided to slow down and collect the sheets. Motor control, static eliminators, registering devices and other necessary accessories were added.

This press is very similar to the Green Hornet line of presses which followed the development of these PsyWar presses. But the Green Hornet is a standard press producing a standard 11 x 17″ sheet while the PsyWar press was a custom made press built around a particular end product with the necessary attachments needed to produce the product.

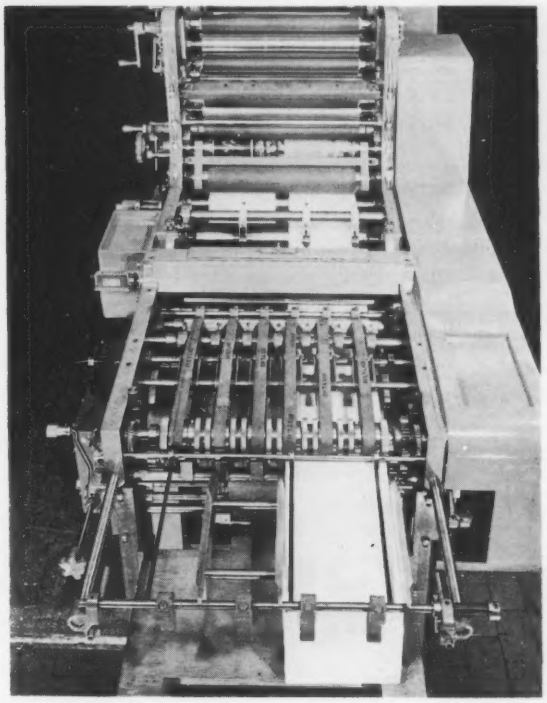
Four Impression Cylinder Designs

Besides these two general classifications, all web-offset presses can be divided into four groups by the type of impression design which they employ:

1. The first of these is most like the sheet-fed press. Each printing unit consists of a plate cylinder, a blanket cylinder and an impression cylinder. The plate and blanket cylinders are very similar to those on sheet-fed presses, except that the gap of the cylinders is extremely small since this space is a non-printing space on the web of paper. Each unit is capable of printing one color on one side of the web. This type of design is called the "open" or "in line" design.

Additional units are required to put each additional color on the web. To print the reverse side, the web is turned over between units by means of turning bars to expose the unprinted side of the web to the remainder of the printing units. Obviously these turning bars limit the thickness of the paper and increase the danger of smearing the printed ink. Usually these presses are equipped with a rewind or sheeter although a folder could be attached instead. They do not usually employ a drier but depend on fast setting inks and absorbent paper. The little PsyWar press described above is of this design.

In order to reduce the number of units necessary, it is possible to "double-end" the web. Double-ending means that after the web has passed through the printing units,



ATF Green Hornet, **a web-offset jobber, illustrating the double ending principle. Note the two half-width webs running through the units to print two colors on both sides on a two-unit press.**

it is turned over and passed through them again to print the other side of the web. Naturally this means that a web of only half width can be employed, because two of these narrow webs are passing through the printing units at the same time.

Figure No. 1 shows the open design. By using one web, four colors can be printed on one side of the web, the other side remaining blank. Or, a half-width web can be printed on both sides in four colors by double ending. (The double-ending device is not shown.) By using one full width web and the first set of turning bars, one color is printed on one side and three colors are printed on the second side. By using the second set of turning bars, two colors are printed on each side of the web.

Using two webs, it is possible to print one color on each side of both webs, or two colors on one side of both webs, or one color on both sides of one web and two

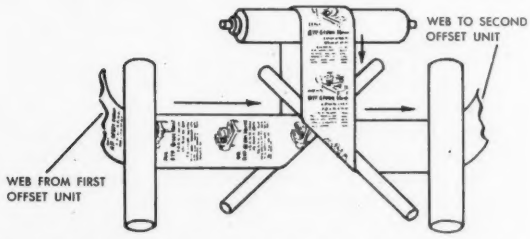
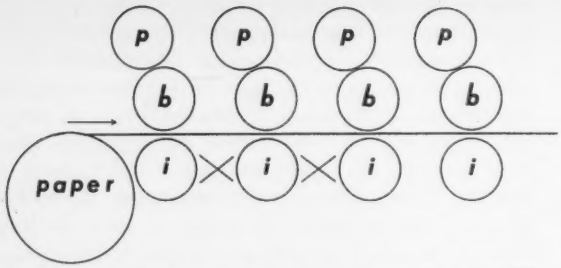


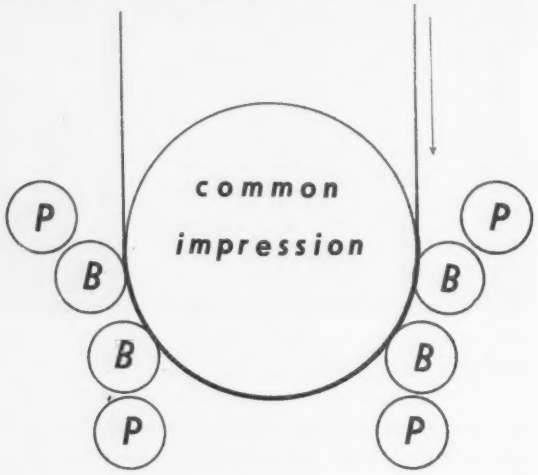
Diagram shows **how the web is turned over by the angle rollers of the turning bars. This device is used to print the reverse side of the web. However, by making identical plates, it is possible to "work and turn" the web for increased production.**



Open or inline principle. **Used chiefly on color and small publication presses. Each unit has a plate, blanket and impression cylinder, just as in sheet-fed. The crosses represent turning bars for turning the web over.**

colors on one side of the second web, the reverse side of this second web remaining unprinted. Naturally there are other combinations if additional webs or double ending are employed.

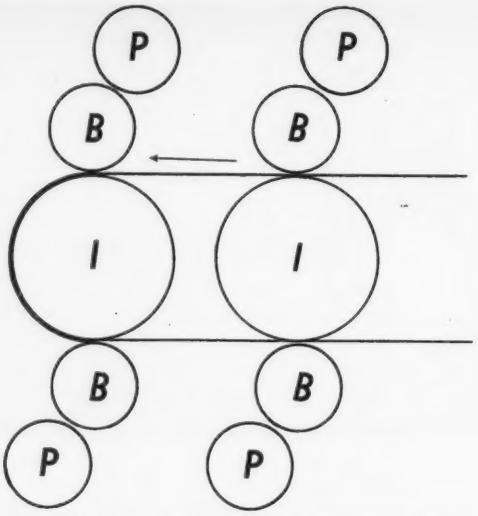
2. The second type is called the "drum" or common impression cylinder design. Instead of each blanket cylinder having its own impression cylinder, the blanket cylinders are grouped around one large impression cylinder. To print the reverse side of the web, a second impression cylinder and its plate and blanket cylinders are required. Or you can double-end a half-width web around the one unit. Figure No. 2 is of this design. Using



Common impression **or drum design, as used by the Aller Company for large publication and speciality presses. Note the excellent lap around the common impression cylinder to insure control of the web for color register.**

one web, four colors can be printed on one side of the web, the other side remainding unprinted. By double-ending a half web, four colors can be printed on both sides.

3. Sometimes a modification of the common impression cylinder is employed. Instead of grouping all the plate and blanket cylinders which will be used to print one side of the web around one impression cylinder, they are grouped around two impression cylinders, as shown in



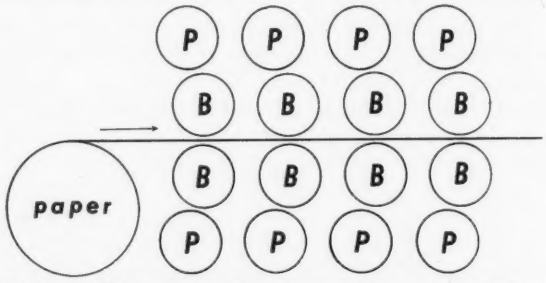
Semi-drum **design. Very similar to the drum in that one impression cylinder serves more than one blanket cylinder. This design was used by Harris-Cottrell Co. for an 8-color press which was built for the production of comic covers.**

Figure No. 3. These two units have the same capacity as the one unit in Figure No. 2.

4. The fourth design is the most radical and most popular, especially for publication work. The impression cylinders are eliminated completely. A unit consists of a top plate cylinder, a top blanket cylinder, a bottom blanket cylinder, and a bottom plate cylinder. The web passes between the two blanket cylinders and is printed on both sides at once ("perfected").

The top blanket cylinder acts as the impression cylinder for the bottom blanket cylinder and the bottom blanket cylinder acts as the impression cylinder for the top blanket cylinder. The amount of pressure between the two blankets is not excessive—.004." To print additional colors, additional perfecting units are required.

Figure No. 4 shows this "blanket to blanket" design. With the four units, one web can be printed on both sides



Blanket to blanket **design. Note absence of impression cylinders. This popular design is used by Hantscho, ATF Webendorfer, and Harris-Cottrell for publication presses. Each unit prints simultaneously on both sides of the web.**

in four colors, or two webs can be printed on both sides in two colors, or three webs can be used—one being

(*Continued on Page* 112)

an up-to-date report on

Presensitized Plates

PRESENSITIZED plates have been accepted so overwhelmingly by the lithographic industry in the past few years that it is difficut to find a litho shop—particularly in the small and medium size categories—that is not using them for at least some jobs. That is the important conclusion MODERN LITHOGRAPHY reached after bringing its 1956 survey of presensitized plates up to date.

Readers may remember the three-part survey of the field three years ago, which showed that, as of early 1956, 75 percent of the litho shops surveyed by ML were using presensitized plates, and of these, about three-quarters, in general, were satisfied with them.

A spot check by the ML staff indicates that both usage and satisfaction have increased appreciably in the three-year period.

To give readers an up-to-date picture of the major types of presensitized plates—their specifications and characteristics—ML has revised the check chart which was so well received in 1956. In preparing the revised chart ML noticed several trends in the presensitized market:

- The move is toward a more complete line of plates, for all shop uses, and for all types of jobs.
- Most manufacturers are making bigger plates, (two supplying 47¼ x 59″) to accommodate the larger offset presses.
- Three companies are making heavier plates, in answer to some earlier criticism that the thinner plates were sometimes subject to buckling.
- Three suppliers are offering both negative- and positive-working plates today, whereas only one offered both in 1956.

In order to get a clear picture of presensitized plates as they are today, ML offered an open forum to the companies making the plates. We have limited this discussion to those plates which are available in size 14 x 20″ and larger. The reports of technical men in each of six companies are included in this article.

Also included is a chart summarizing the characteristics of each of the plates. The chart is arranged so that you can note at a glance all the distinguishing features of one plate, or take one characteristic and compare all the plates.

Basic Similarities

Presensitized plates have some basic similarities. The base material is either aluminum or paper. The surface coating on the aluminum plate is of the diazo type. (Most manufacturers of the paper plates did not specifically state the nature of the coatings on their plates.)

The most important characteristic of all the plates is that they come to the litho shop ready for exposure and with a shelf-life of at least six months. In all cases, they can be made ready for the press in five or 10 minutes and will produce jobs of equal or superior quality to conventional albumin coated zinc plates. That is the claim of the manufacturers. It is also the opinion of representative litho shops surveyed by ML.

Preparation of the plates varies, but in most cases, the procedure is something like this: (1.) The plate is exposed in a standard exposure frame, the time depending on the lamps used and the nature of the work. (2.) The plate is developed with a gum or acid solution, using cotton or a cellulose sponge, and wiped off. (3.) Lacquer or developing ink and then gum are applied in some cases, although these steps are consolidated with No. 2 for several of the plates. (4.) The plate is locked on the press in the normal way, press settings varying with the thickness of the plate.

Aside from these basic similarities, presensitized plates are different in several important ways, as any lithographer who has investigated them knows. For one thing, some are positive and some are negative working. Thickness varies from plate to plate, as does the method of developing them. Most are grainless but three have a fine grain. Only Lithoplate makes a two-sided plate, the others being usable on one side only.

Deletions, Additions

It is possible to make deletions on all the plates considered in this review, and lithographers can *add* material on all but two. All but one of the plates (made of paper) can be stored for reruns.

As for press settings, suppliers are in agreement that they should be the minimum that will produce good printing. Likewise, ink and water should be held to a minimum. Any conventional ink will work, according to the makers, with the more fluid, non-abrasive types preferred.

On the important question of number of impressions possible with the presensitized plates, the estimates and claims vary. The paper plates, understandably, are limited to runs around 5,000. The aluminum plates are good for considerably longer runs, up to 50,000 impressions and beyond in many cases. Manufacturers are reticent about

making strong claims in this department. Most guarantee a modest run but report much longer runs in actual use in litho shops.

It is not the purpose of this article to make recommendations on the various plates. That is something for the individual lithographer to study and decide upon for himself. Nor is it possible, in an article of this length, to go into the various other coatings available to lithographers for use with plates, both presensitized and conventional. Rather, it is hoped that the reports from technical men at the companies, and the accompanying chart, will help steer the interested lithographer toward a decision as to what plate will fit in with his particular type of work. For information on any plate, it is suggested that readers contact the manufacturer at the address listed.

Azoplate Corp.
558 Central Avenue
Murray Hill, N. J.
E. B. Fritz

The sole business of Azoplate Corp. is the manufacture of presensitized plates under the trade name Enco. The personnel at Enco brought the first presensitized plate to America, and today Azoplate is the only organization that markets a complete line of presensitized plates—a plate to meet every need of the lithographer. Enco Plates are manufactured in aluminum, both positive-working and negative-working, in thicknesses from .005 to .012″, depending upon the size of the plate. In addition, the Enco Pacemaster—an acetate/paper plate designed for fast, easy processing at low cost—is available in negative-working. The thickness of the Pacemaker is .006″ for duplicators and .012″ in larger sizes. All of these plates are available in standard sizes up to 40 x 48″ and in larger sizes upon special order.

Only one solution is necessary to process the negative working aluminum plate—Developer DF. After exposure, the image is visible and after application of Developer DF the background is removed, leaving the image area highly visible. If desired, the image can be inked up using developing ink or Intensifier CI-4. For extremely long runs the use of Long Run Lacquer LR-1 is suggested.

The positive working plate, after exposure which is approximately that of a deep-etch plate, requires the use of Positive Developer PD-1 which is applied to the surface, completely removing the background. Following this, PF-2 Positive Finisher is used to etch the plate. The image is then visible and the plate is ready for the press. If desired, the plate can be inked up with developing ink or Image Intensifier CI-4 and, where extremely long runs are desired, Long Run Lacquer LR-1 is available.

Unwanted areas or images are readily removed from Enco Aluminum Plates, either positive- or negative-working, by the use of Image Remover 3R which is available in liquid or paste form. In a matter of seconds the image is completely removed from the surface of the plate.

The acetate plate can be run directly after exposure, or if desired it can be desensitized using Developer ND prior to running. Image Eradicator is available for deleting unwanted areas from the Pacemaster Plate.

Enco aluminum plates have a fine grain which makes the plates highly resistant to scratching and also makes the plate halation-free. The grain also affords traction for ink and molleton rolls and enables a better control of ink/water balance. The Enco positive-working plate was the first of its kind on the market, having been introduced in 1953. Today it is recognized as an economical quality alternate to the deep-etch plate, and it is widely used in color proving as well as on regular press runs. With photocomposing equipment it finds ready use in that the photo positive can be exposed directly to the plate. All Enco plates can be stored and rerun and information can be added by means of a stylus. Exposure times are unaffected by temperature and humidity.

Remington Rand
315 Fourth Ave.,
New York 10, N. Y.
Alex Tassos

Presensitized Photospeed Plastiplates are bonded plastic plates on a wood pulp waterproof base. Plastiplates are available for Addressograph-multigraph, Davidson, Ditto, Whitin, A. B. Harris and Miehle presses in standard sizes 10″ x 15″, 14″ x 20″, and larger to 31″ wide. The surface is inert material, and Plastiplates have long shelf life. Corrections are made with an ordinary rubber eraser. The plates are approximately .007 thick; some .010.

The secret of Plastiplates' performance lies in the patented plastic "no-grain" surface. The plastic completely permeates the wood-pulp base. The result is that the image actually "bites into" the surface, giving stronger solids, softer tints, sharper detail work. In addition, the problems of fingermarking and scratching are virtually eliminated in Plastiplates. Finally, Plastiplates' "self-cleaning" feature means that they clean themselves of excess ink right on the press.

The benefits of Plastiplates may be summed up as follows: sharp copies; fast, safe corrections, longer runs, fingerprint and scratch resistance, and dimensional stability for better registration.

Lithoplate, Inc.
(Subsidiary of Harris-Intertype Corporation)
278 N. Arden Dr.,
El Monte, Cal.
C. D. Harmon

Lithoplate, Inc., manufactures a complete line of presensitized, photo-offset plates, both negative and positive-working. These plates, and their respective processing solutions, are marketed through leading graphic arts suppliers under the Harris Alum-O-Lith brand name.

The Harris Alum-O-Lith negative-working plate is available in all sizes from 8½ x 12″ up to 47¼ x 59″. These plates are made of heavy-gauge sheet aluminum, .005″ thick for the small sizes up to and including .015″ for the large plates. This metal base prevents stretching, kink-

ing or tearing under normal pressroom conditions. The plates can be mounted and removed from the press with the same minimum care required for marble grained plates.

Both sides of the Harris Alum-O-Lith negative working plate are chemically treated and coated with a light sensitive diazo. This provides two equal printing surfaces of extremely high quality, enabling the lithographer to realize a 50 percent reduction in plate material costs. The companion line of processing solutions are Desensitizer, Developing Lacquer and Plate Cleaner.

The Harris Alum-O-Lith positive-working plate is available in standard sizes from 10 x 15″ up to and including 32½ x 43″. Gauge of the metal ranges from .005 to .012″ depending upon the plate size. One side of the positive-working plate is chemically treated and coated with diazo.

The Harris Alum-O-Lith positive plate is processed in three simple steps after exposure: 1. Positive Lacquer is applied to entire plate surface, 2. Positive Developer is applied to surface to remove light-struck diazo, and 3. Positive Fixer is applied to render non-image areas water-receptive and plate is ready for press.

Minnesota Mining & Mfg. Co.
900 Bush Avenue
St. Paul 6, Minnesota
D. J. Blomberg, Jr.

The 3M Plate is an all aluminum, diazo coated, presensitized plate, .005″ to .012″ in thickness, depending upon size. It is being manufactured in sizes from 10 x 15″ to 47¼ x 59″. Upon special order we manufacture plates (negative working) in any size up to 59″ wide in any length. Shelf life of 3M Plates is six months, and the date appears on each package. However, shelf life over six months is not particularly critical.

Minnesota Mining & Manufacturing Co. is now manufacturing positive acting 3M plates in sizes ranging from 15½ x 20½″ to 36 x 42½″.

Most handling procedures for our negative plate are the same as previously. However, we have improved both plate surface and processing chemicals and are now marketing developing pads and recommending improved techniques in processing larger sizes of plates. Plate improvements and chemical improvements now allow us to recommend a step six exposure on the gray scale which is a 50 percent reduction in exposure time from that previously recommended.

The positive acting 3M plate should be exposed to an open step five on the gray scale, and processing techniques are different. After exposure, the positive plate is desensitized with 3M Positive Plate Desensitizer and is no longer light sensitive. The plate is then wiped dry, and while dry, 3M Image Developer is applied to the plate with Webril Wipes and the plate is rubbed up and thus developed. The plate is then gummed. 3M's Positive Acting Plate handles on the press very similarly to the negative acting plate. This plate features a clearly visible image immediately upon exposure.

Mileage on 3M Plates has been substantially increased due to improvements in the processing techniques and improved new Image Developer. In a recent national spot survey we determined that 3M Plates will complete the run on over 90 percent of all jobs coming into the average litho shop.

Ozalid
Johnson City, N. Y.
W. A. Boetcker

Ozalid makes two plates; of paper and aluminum. The paper plate consists of a high strength, moisture-resistant paper base of about .0055″ thickness which bears a lacquer carrier layer and a diazo sensitizing layer. This plate has extremely high sensitometric contrast characteristics. It is used largely in the duplicator field.

The Ozalith aluminum positive plate is new and consists of a diazo compound coated onto mechanically grained and chemically treated aluminum. Aluminum positive plates are available in .006″ thickness in small sizes and in .012″ in larger sizes in accordance with press manufacturers' specifications.

Both paper and aluminum plates are guaranteed for a period of six months from the date of manufacture; however the aluminum plates appear to have a shelf life well in excess of one year.

Ozalith aluminum plates have a new super velvety grained surface. On the press they use very little water. Screened halftones and tints run clear. Ink mottling is reduced and color rendition is excellent. Plates are made in thicknesses corresponding to press manufacturer's specifications and are therefore easier to mount on the press; creeping and wrinkling difficulties encountered with thinner gauge plates do not occur. The plate has excellent stability before and after processing and is virtually unaffected by temperature and humidity. Properly preserved plates can be readily re-run. Images can be deleted by applying Ozalith Image Eradicator.

Ozalith aluminum plates are durable, dimensionally stable, simple to process and easy to run. Ink-and-water balance maintenance is much less critical to maintain than with conventional negative aluminum plates. They ink up rapidly on the press and are highly scum-resistant. Depending on the light source used for exposure, an Ozalith aluminum plate can be exposed, processed and ready for running in three to five minutes.

S. D. Warren Co.
89 Broad St.,
Boston 1, Mass.
Chester Gramstorff

FotoPlates are constructed of two .006″ sheets of paper laminated for dimensional stability. The printing surface is a plastic material, the nature of which is very similar to the old lithographic stone. It has a very fine grain which is capable of reproducing screens as high as 300 line. This plastic material is also hydrophilic, which helps the pressman to maintain a fine ink-water balance and

(*Continued on Page* 111)

Turn page for chart on plates ▸

Manufacturer	Base Material	Size Range	Surface	Thickness of Plate	Grained or Grainless	Lacquer or Intensifier	Positive or Negative	Shelf Life	Deletions Possible	Additions Possible	Reruns	Press Setting	Length Run	Ink Needed	One or Two-Sided
Azoplate	Aluminum	8½ x 12 to 40 x 48[1]	Diazo	.005 to .012	Fine Grain	Yes	Positive and Negative	Six Months from Shipment	Yes	Yes	Yes	Minimum consistent with Good Printing	Lithogs. report up to 50,000[2]	Normal	One
	Acetate Paper	8½ x 12 to 40 x 48"[1]	Diazo	.006 to 0.12	Acetate	No	Negative	Six Months from Shipment	Yes	Yes	Yes	Minimum consistent with Good Printing	Lithogs. report up to 5,000	Normal	One
Lithoplate, Inc. (Subsid. of Harris-Intertype Corp.)	Aluminum	8⅞" x 14½" to 47¼ x 59"	Diazo	.005" to .015"	Micro Surfaced	Not Needed	Positive and Negative	Six Months	Yes	Yes	Yes	Minimum Pressure	10,000—75,000	Normal	Two
Minnesota Mining	Aluminum	10" x 15" to 47¼ x 59"	Diazo	.005" to .012"	Smooth	Yes	Positive and Negative	Six Months[3]	Yes	Yes	Yes	.002" to .003"	Equal or better than other surface plates	Normal	One
Ozalid	Paper	8½" x 12" to 20½" x 20½"	Diazo	.0055"	Grainless	No	Positive	Six Months	Yes	No	No	Normal for Offset Duplication	1,000	Any Good Offset Dup. Ink	One
	Aluminum	10" x 15" to 32½" x 43"	Diazo	.006" (small) to .012" (large)	Very Fine	Yes	Positive	Six Months to One Year	Yes	Yes (Minor)	Yes	Minimum Pressure	[5]	Normal	One
Remington-Rand	Wood Pulp	All standard sizes to 23" x 19¾"[4]	Inert Material on Plastic	.007" and .010"	Grainless	Not Needed	Negative	Six Months	Yes	No	Yes	Minimum Settings	Vary with Job	Normal	One
S. D. Warren	Paper	10" x 16" to 32½" x 43"	Pigmented Hydrophilic Plastic (similar to litho stone)	.012"	Very Fine Grain	Not Needed	Negative	One Year from date of Mfgr.	Yes	Yes	Yes	Minimum Settings	5,000	Normal (more fluid)	One

[1] Larger sizes soon available
[2] And more; mfrs. tests for 10,000 critical copies
[3] Not particularly critical
[4] Also special sizes to 31" wide
[5] Too new and too many variables to state exactly. Runs over 50,000 reported.

View of Page Lithograph's new six-unit web-offset Dutro-Hendy press, looking toward the dryer section of the unit.

On West Coast:

Page Sets Pace in Web-Offset

By *Edward J. Meier*
Los Angeles Correspondent

BOASTING a new six-unit Dutro-Hendy web-offset press, said to be the largest facility of its kind west of Chicago, Page Lithograph Co., in Los Angeles, is gearing for the biggest year in its 37-year history. The company expects 1959 to be its "time for decision" for a move to an area of approximately 40,000 square feet in the San Gabriel or the Long Beach —Los Angeles Harbor vicinity. Present facilities in the heart of Los Angeles are inadequate to house all six units of the new web-offset press.

The company was one of the first to use lithography for production of newspapers, starting in 1945. Page Lithograph specializes in standard and tabloid newspapers, and in most any type of long run job for the web-offset press. Through Page Publishing Co., an affililate, the offset shop publishes the *Daily Shipping Guide* for the Ports of Los Angeles and Long Beach (also, the *Los Angeles Journal of Commerce*); the weekly *Commercial News* in Los Angeles and *Freight Service News* for San Francisco and Oakland. Outside publications currently being lithographed include *Navy Digest* for the Long Beach Navy Shipyard (a slick weekly magazine) and many small grocery publications.

Dutro-Hendy Press

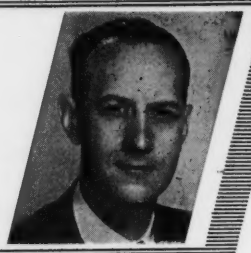
The Dutro-Hendy press was purchased in February, 1956, and has undergone extensive "shakedown" and experimental work. Units of the press were originally operated by Time and Life magazines on the west coast. Page has four units in full operation now and will add the remaining two units as soon as new plant space is located. The press has a 37½" web width, a sheet cut-off of 45 inches and a folder cut-off of 22¾ inches.

C. A. Page, Sr., who comes from a prominent Boston family, started the company by publishing the first *Daily Shipping Guide* in 1921. The *Commercial News* and *Los Angeles News* were established shortly thereafter. All of these publications were at first printed by letterpress. Just prior to World War II, Mr. Page started to print community and trade papers in Los Angeles County, building up this business to a figure of 25 weekly papers. After his death after the war, his son C. A. Page, Jr., took charge of the publishing business after completing service in the Coast Guard. The company had cold type then and operated Ebco and Miehle presses. A Harris, 54 x 65" offset press was added several years ago.

The company has its own camera (Robertson), dark room, and complete plate processing department. Other equipment includes two sets of Justowriters, three headsetting machines (larger type, Coxhead), two

(*Continued on Page* 121)

PHOTOGRAPHIC CLINIC



By *Herbert P. Paschel*
Graphic Arts Consultant

Fine Screens, Infrared Plates

It is impossible for Mr. Paschel to give personal replies by mail, but all questions will be answered in this column as soon after receipt as possible. The columnist also is available to the trade as a consultant for more complex litho problems.

Extremely Fine Screens

Q: I know that using extremely fine screens requires greater accuracy and control in all operations than with the rulings normally used. Would there be sufficient gain in print quality to justify the headaches that might be involved?

C.A.B., PROVIDENCE

A: There are two major factors that determine picture quality — detail rendition and tonal range. The maximum ink density and maximum paper brightness establish the total scale possible. Regardless of the screen ruling used — coarse, medium, or fine — the total scale remains unchanged. The number of tones that are distinguishable between the extremes of black and white increase as the screen ruling becomes finer. However, there are many limiting factors to this general rule. Beyond a certain point in screen fineness, tone distortions in the middle tones may develop as well as a complete loss of a number of tones at both ends of the scale. The exact nature and degree of the losses and distortions are influenced by the paper, ink, plate and the press.

As for detail, it is obvious that the finer the screen, the better the delineation of fine detail. But here too we cannot be dogmatic because of the influence of dot sharpness, image contrast, surface characteristics of paper and image, and many other factors.

Unless the nature of your work absolutely demands it, I would not suggest going beyond a 150-line screen. In fact, taking into consideration all of the operations involved—photography, platemaking and press —the 133 line screen would probably be a better choice.

Infrared Plates

Q: Making a black printer with infrared plates seemed to be quite popular at one time but has since declined. Does the method have enough merit to warrant experimenting with it now?

A.P.S., BOSTON

A: Unless you have full control over the source and type of originals for reproduction, you'll find the disadvantages outweigh the merits. The infrared method imposes serious restrictions on the characteristics of the color copy. The foremost drawback is that copy is limited to reflection-type artwork in a limited range of art media. The palette cannot contain various infrared absorbing pigments, nor can the artist mix his colors in the usual manner. Originals that are basically dye images, and this embraces most color photographs, are excluded from the method because of almost complete transparency to infrared radiation.

The method fell into disuse principally because, without control of the copy, there was no practical way to predetermine whether or not the copy contained unsuitable colorants. Not until the negative was exposed and processed could the photographer be sure of the result. If unsatisfactory, it meant a double expense in time and material. This sort of thing happened more often than not simply because the offending pigments were so widely used in most art media. Furthermore, an infrared black does not always provide all of the drawing necessary for certain types of illustrations.

In a shop doing color work from all types of copy, the use of the infrared technique for an occasional job might be more of a nuisance than a help. But if the bulk of the work is reproduction of art work, and this can be rigidly controlled, the infrared method could prove very desirable.

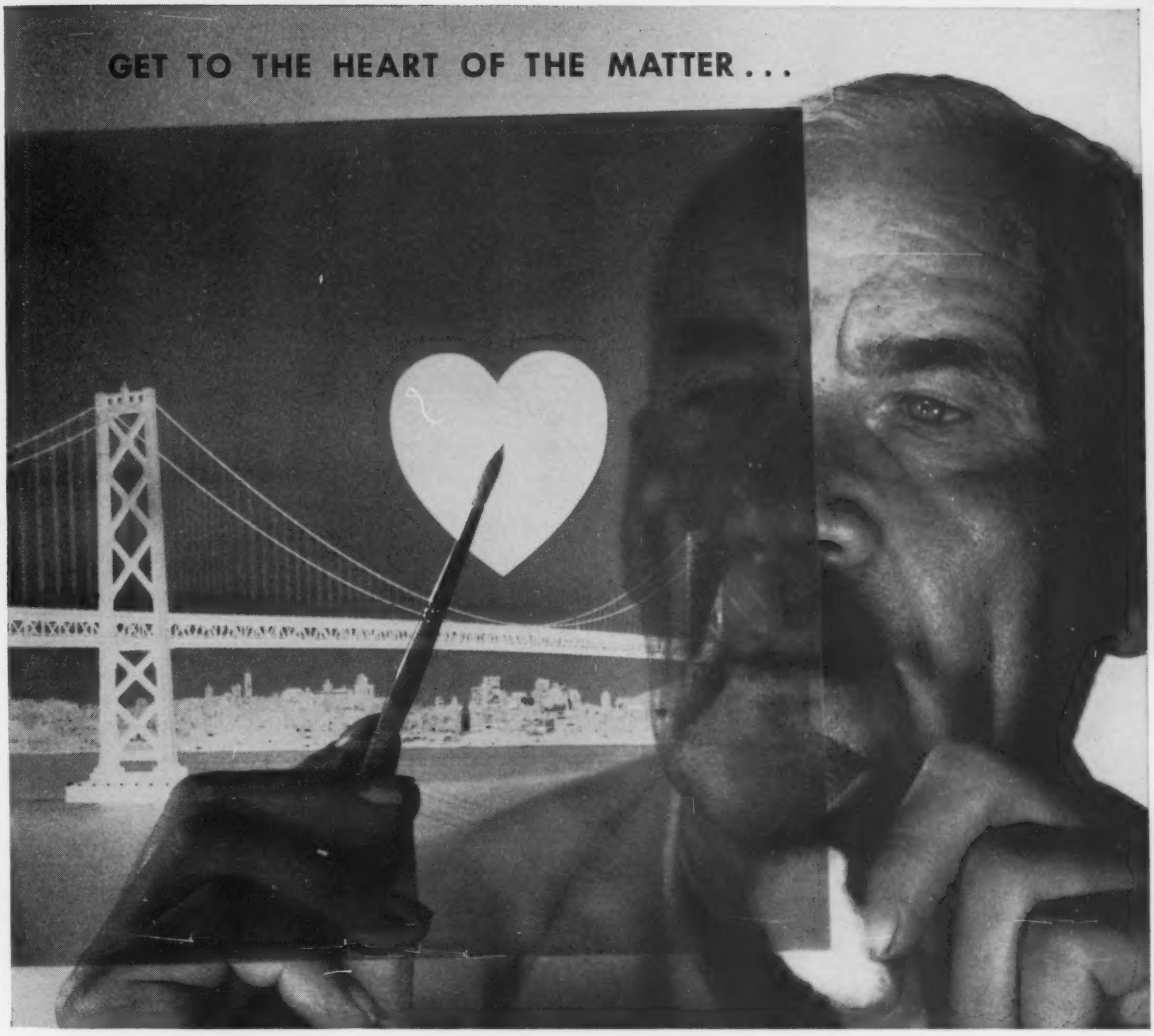
Defects in Negatives

Q: What can I do to avoid defects in negatives due to impurities in the tap water?

C.B.N., BURLINGTON, KY.

A: Your first step should be to have your water analyzed. Unless the impurities are known, the exact remedy cannot be suggested. It is

(*Continued on Page* 109)



DOT ETCHER touches the heart of the matter—the emulsion. He finds it's *easier to hold pinpoint dots and the emulsion sticks to the base* when he's working on new Kodalith Ortho Film, Type 3.

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LITHO CLUB NEWS

Twin City

Selects New Officers

Leonard Holzinger was elected president of the Twin City Litho Club at the Dec. 4 meeting held at the Criterion in St. Paul.

Other officers for the current year are Kip Goebel, vice president; Frederick Schulz, secretary; and Andrew Anderson, treasurer.

John Gawlik, Roger Strand, Richard Keller, Mel Ferlaak and Leo Holzinger were elected to the board of governors.

The educational portion of the meeting featured a talk entitled "Pins, Punches and Profits" by Russell I. Haywood, chief engineer for the Dayton Division of the Harris-Seybold Co.

Mr. Haywood described the various applications of the new Harris Key Register System and several kinds of punches.

New members of the club are Robert T. Maley and Rex Morgan.

Washington

Holds Technical Panel

The Washington Litho Club, late in November, held a technical panel designed to acquaint the apprentice and early journeyman with such things as viscosity, snowflaking, pH control, roller stripping, etc., and how they affect the lithographic process. More than 250 persons attended.

In addition to the panel of local craftsmen and technical men, representatives of many of the leading suppliers were on hand to answer specific questions about their products. Moderator of the panel was Albert Materazzi, Litho Chemical & Supply Company.

Panel members were Joseph McSweeney, Progressive Color Co., for camera and color; Robert Hancock, Sauls Lithograph Co., stripping and layout; Robert Luciani, Haynes Lithograph Co., platemaking; Richard Kline, Capital Printing Ink Co., inks; "Buck" Burgess, Colortone Press, presswork; and James Austin, S. D. Warren Co., for paper.

The Club's annual Christmas party was held at the Sheraton-Park Hotel on Dec. 20. Leo B. Krebs was in charge of arrangements. Committee members were Frank Frazzano, Thomas Bowden, John Grant, Thomas Holford and Robert Spruell.

New members of the club are Dean W. Braley, Universal Printers; Gordon A Dayton of Stant Lithograph Co.; George S. Jones, Printers Finishing & Mfg. Co.; Frank J. Kowley, Interchemical Corp.; Paul R. Leisz, Navy Hydrographic Office; William H. Meeks of the T. E. Wallace Co.; Mabra F. Newman, Navy Hydrographic Office; Hallett H. Potter, Sauls Lithograph Co.; Gilbert E. Poudrier and Charles D. Rice of Moore & Moore, Inc.; and Robert M. Silcott of McArdle Printing Co., Inc.

M.L.A.

Houck To Address MLA

George C. Houck, president of the Harris-Seybold Co., will speak to members of the Metropolitan Lithographers Association on Jan. 27 at the Roosevelt Hotel. The title of his address will be "Translating Policy into Programs of Action."

Mr. Houck also is a vice president and director of Harris-Intertype Corp., and chairman of the board of the Macey Co., another subsidiary.

Cincinnati

Selects New Officers

Members of the Cincinnati Litho Club met at the Alms Hotel on Dec. 9 to elect new officers.

Thomas Lacker, Advance Decalcomania Co., was elected president, succeeding Peter Schannes, Mail-Way Advertising. Other officers are Russell Esberger, Tru-Color Offset Service, vice president; Joseph Hoffer, Gibson Art Co., treasurer; and Harold Biddle, Standard Publishing Co., who was reelected secretary.

New members of the board of directors are Glen Menzer, Offset Plate Graining Co.; Jack Hurst, Nielson Lithographing Co.; and Jack Kirst, Aljen Associates.

The 50 members present also saw a movie entitled "Sutton Street," courtesy of the Champion Paper & Fibre Co.

Anthony Ventre, Strathmore Press, is a new member of the club.

The club's annual dinner and dance will take place at the Hartwell Country Club on Jan. 10.

New officers of the Cincinnati Litho Club are (seated, l.-r.) Harold Biddle, Standard Publishing Foundation, secretary; Thomas Lacker, Advance Decalcomania Co., president; Russell Esberger, Tru-Color Offset Service Co., vice president; Joseph Hoffer, Gibson Art Co., treasurer. (standing l.-r.) are the trustees: Jack Kirst, Aljen Associates; Jack Hurst, Nielson Lithographing Co.; and Glenn Menzer, Offset Plate Graining Co.

Cent. Wisconsin

Elects New Officer

Members of the Central Wisconsin Litho Club met at the Legion Club in Appleton, Wis., on Nov. 5 for the election of officers. Melvin Buxton of the Marathon Corp., last year's vice president and program chairman, was elected president.

Other officers for the current year are Alden Ferguson, Castle-Pierce Printing Co., vice president; and George Camarda, of the same company, secretary-treasurer.

Members of the board of governors are Leonard L. Jakusz, Raymond Hoelzel, Raymond Yorton and Robert Kraemer. Mr. Yorton is the outgoing president.

Guest of honor at the meeting was Dr. Paul Hartsuch of the Lithographic Technical Foundation.

The club's annual Christmas party was held on Dec. 3 at the Legion Club and featured entertainment, dancing and gifts for all present.

New York

To Elect Officers

The New York Litho Club will hold its annual business meeting for the purpose of electing and installing officers on Jan. 28 at the Shelbourne Hotel, 38th St. and Lexington Ave.

The Club plans to hold its annual Valentine dinner and dance on Feb. 7 at the Biltmore Hotel. Arthur Tarling, Sleight & Hellmuth, Inc., 154 West 18th St., is in charge of arrangements.

Milwaukee

Discusses Printing Papers

Charles A. Morton, product engineer, Kimberly-Clark Corp., discussed new developments and the progress of coated and uncoated printing and writing papers at the November 25 meeting of the Milwaukee Litho Club. The meeting was held at the Stratford Hotel.

New officers of the club are Paul Schneider, president; Milburn Mundy, vice president; and J. Miller,

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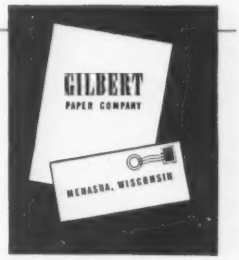
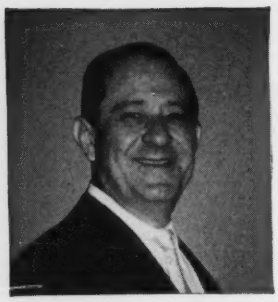
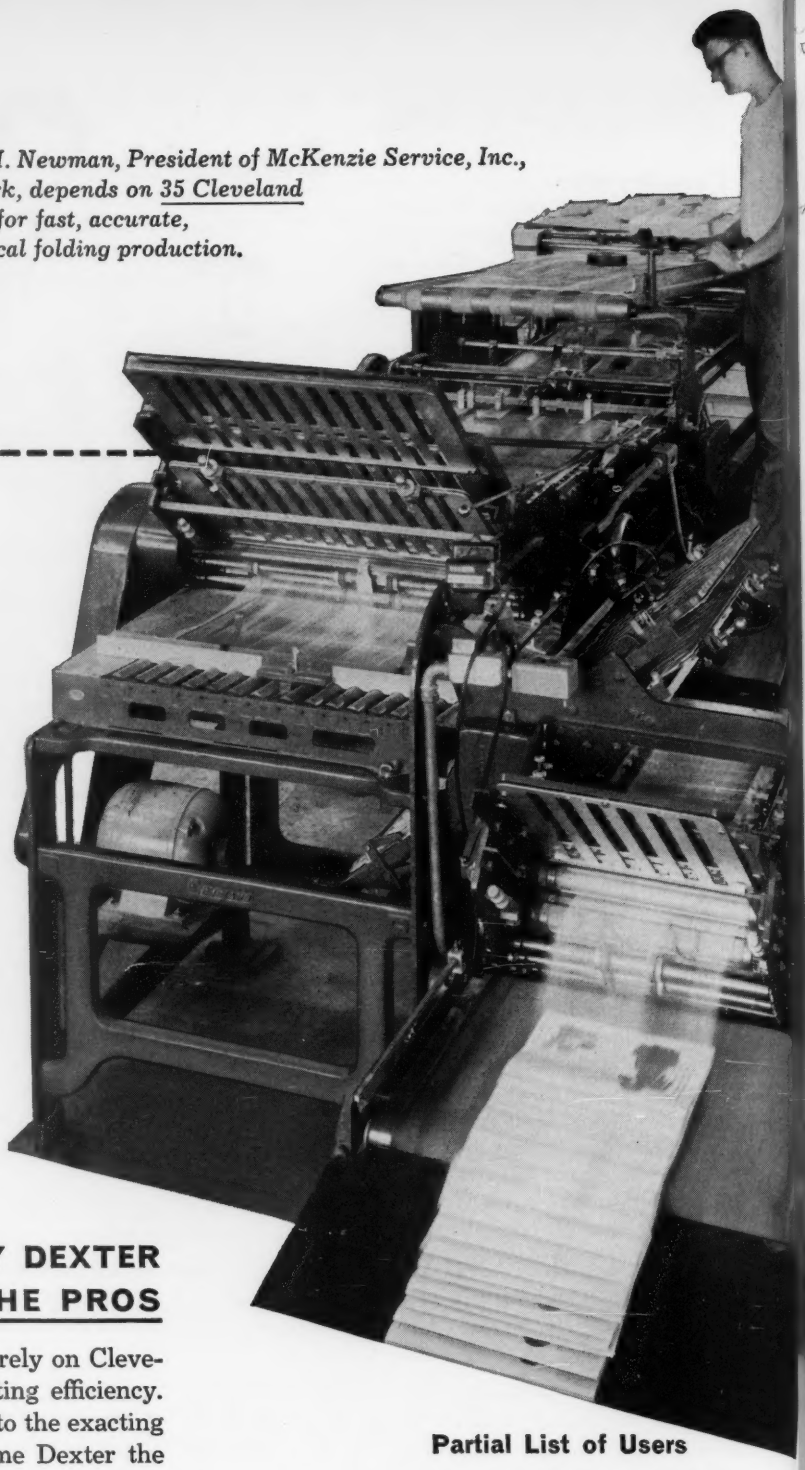




Henry M. Newman, President of McKenzie Service, Inc., New York, depends on 35 Cleveland Folders for fast, accurate, economical folding production.



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The Commercial Press	Methodist Publishing House
Rufus H. Darby Printing Co.	Motheral Co.
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Dosie & Johnson Co.	C. W. Ritter Co., Inc.
Doubleday & Co., Inc.	Riverside Bookbindery
Geo. Gates Co.	Stecher-Traung Litho. Corp.
Hahn Ruling & Binding Co.	Superior Bindery
H & H Bookbinding Co.	Trade Bindery
Hall Bros., Inc.	Van-Row Folding Co.
Haverstick & Co.	Von Hoffman Press
Houston Bindery Co., Inc.	Wetzel Bros. Prtg. Co., Inc.

secretary. Other elected officials are Rudolph Wahl, sergeant-at-arms; James Burns, good and welfare committee chairman; Paul Rothfelder, membership committee chairman; and Roy Tenge, entertainment committee chairman.

Recently inducted members of the club are Mel Wolfgram, Theodore Dobbratz, Alfred Bergmann, Gale Watts, Joseph Steib, Ned Pritchard and Russell Waddell. Mr. Watts is the Club's 100th member.

The Club held its annual Christmas party on Dec. 16, at Milwaukee Turners Hall.

Roy Tenge is in charge of the annual Valentine Dance. Tentative date is Feb. 14 at Turners Hall.

Houston

Describes Lithographing Foil

R. F. Watson, Kaiser Aluminum Co., was the guest speaker at the November meeting of the Houston Litho Club. He discussed the problems encountered in lithographing on aluminum foil, and explained the specialized process. He accompanied his talk with sample pieces.

The nominating committee has announced the candidates for office in 1959. They are Robert Chester, president; Henry Marchwinski, vice president; Grady Caldwell, secretary; and Otis Muckenfuss, treasurer. Running for positions on the board of governors are Richard Heilig, Edward Rockey, Doyle Martin, A. V. Emmett and Edward Blackstone.

New members of the club are James McGahey, Alfred Spurlock and Paul Caldwell.

•

Discusses Estimating

Members of the Houston Club of Printing House Craftsmen centered their November meeting around the estimates of four members on a job that involved difficult numbering. Estimates ranged from $122.50 to $190. Explanations of the estimates drew considerable comment.

Boston

To Hold Forum

The Boston Litho Club, on Jan. 17, will present a "Back To School" forum at Boston University, which will cover five phases of the lithographic industry.

Specific subjects to be covered are management, sales, platemaking, copy preparation and presswork.

Young Lithogs.

To Hear W. H. Walters

William H. Walters, president of the United States Printing & Lithographing Co., will speak to the Young

William H. Walters

Lithographers Association on Jan. 14, at the Advertising Club in New York. His subject will be "The Responsibility of the Individual to Himself, his Company and his Industry."

•

Oscar Chancey Dies

Oscar Chancey, 62, co-owner of the Buffo-Anderson Printing Co., St. Louis, died Dec. 6.

•

Honors Chester Scheidler

Chester Scheidler, vice president of Sleight and Hellmuth, Inc., and founder of several litho clubs in the midwest, was one of five Chicago printing ink industry leaders honored by the Chicago Printing Ink Manufacturers Association at a testimonial dinner late in November.

Bronze plaques citing long service in advancing the progress of printing

Litho Club Secretaries

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BALTIMORE
Harold E. Hackman, Secy.
2950 Loch Haven Rd., Baltimore 18

BOSTON
Vincent J. Aliberte, Secy.
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BUFFALO
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978 Ellicott St., Buffalo 9

CANTON
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CHICAGO
James V. Gianpetro, Secy.
40 S. Clinton St., Chicago

CINCINNATI
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3308 Galbraith Rd., Cincinnati

CLEVELAND
Alvin Martin, Secy.
1011 Power Ave., Cleveland

COLUMBUS
John Morgan, Secy.
905 W. Town St., Columbus, O.

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A. G. Copeland, Secy.
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1809 W. Columbia, Springfield, O.

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Erhard B. Toensfeldt, Secy.
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Frances Porter, Secy.
2301 Huldy St., Houston 19

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Curtis Bourland, Secy.
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MILWAUKEE
Jack W. Miller, Secy.
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Louis Happ, Secy.
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Joseph H. Winterburg, Secy.
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PIEDMONT
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198 Weston Rd., Rochester 12

ST. LOUIS
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7023 Radom., St. Louis 16

TULSA
Mrs. Madeleine K. Hare, Secy.
2521 South Birmingham Place
Tulsa 14

TWIN CITY
Mr. Kip Goebel, Secy.
138 Montrose Place, St. Paul

WASHINGTON
Raymond Geegh, Secy.
P.O. Box 952, Ben Franklin Station, Washington 4

CENTRAL WISCONSIN
William Zimmerman, Secy.
Rt. 2, Box 531, Menasha, Wis.

inks and the graphic arts generally were presented to Mr. Scheidler; Sherman Ruxton, Interchemical Corp's printing ink division; Frederick Farnsworth, General Printing Ink Co., div. of Sun Chemical Corp.; George Warmbold, Sinclair & Valentine Co.; and Harold Kernell, General Printing Ink Co. All were at various times officers of the Chicago Ink Association.

Mr. Scheilder entered the printing ink industry as an errand boy for the Chas. Hellmuth Co., 60 years ago, when he was 13. In 1911 he became branch manager in Chicago and when Hellmuth was merged with Sleight Metallic Ink Co., he became vice president of the new company. He helped found the Chicago Ink Association in 1932 and served as its first president.

Mr. Scheilder is credited with being instrumental in the organization of litho clubs in the larger cities in his midwestern sales territory. In his trips to Milwaukee, Minneapolis, Cincinnati and other cities he began talking up the idea of litho clubs similar to that in Chicago. Eventually, his efforts were rewarded with the organization of clubs in six cities.

Discusses Automation

The future of bank automation was the subject of a two-day fall conference of the Bank Stationers Section of the Lithographers and Printers National Association in mid-November. Held at the Sheraton Park Hotel in Washington, the meeting was attended by approximately 120 bank stationers, machine manufacturers and suppliers.

The common problems involved in magnetic ink encoding were illustrated in a slide film demonstration by E. D. Spina, IBM project engineer. Mr. Spina showed the results of experiments with magnetic ink encoding up to the present time and the difficulties that all types of printers and imprinters, as well as processors, have encountered.

A discussion of the various methods of improving printing materials, equipment and in-plant procedures to assure that the printed product meets with the requirements of bank and machine manufacturers followed.

Speakers participating in this part of the meeting were Ewald Sjogren, superintendent, Matrix Div., Harris-Intertype Corp., who spoke on what is being done to improve the matrix and type supplied to bank stationers; Clark R. Gregory, Jr., president, The Herald Printery, Louisville, who discussed letterpress problems in magnetic ink encoding; and Michael H. Bruno, research director, Lithographic Technical Foundation, who discussed offset problems and their solutions. George W. McSweeney, president, De-Luxe Check Printers, Inc., tackled current automation developments.

Group methods of initiating statistical quality control was the subject discussed by Gordon Dalsemer of the Lord Baltimore Press. He commented that with such methods printers may be assured of obtaining encoded material in conformance with required standards.

A panel discussion covering a wide range of automation topics was held under the chairmanship of Edward A. Robinson, The J. C. Hall Co., Pawtucket, R. I., with Frederick J. Kraemer, Jr., president, Dennison & Sons, Long Island City; Cecil Rudnick, Rudco Checks, Inc., New York; and Mr. McSweeney participating.

The speakers covered methods of keeping plant personnel informed of modern developments and requirements; methods of improving procedure and equipment; checking of materials to meet proper specifications; and the various types of testing equipment available to check encoding prior to shipment to customers.

•

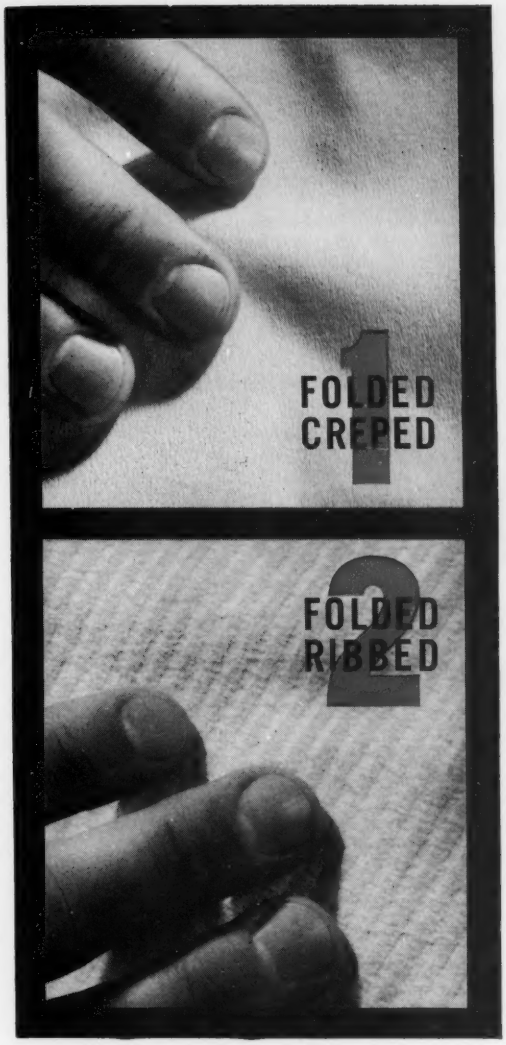
PIP Elects New Officers

The annual business meeting of Printing Industry of Pittsburgh on November 20 at the University Club was highlighted by the election of officers and five new directors.

Arthur W. Rippl, of the Arthur W. Rippl Printing Co., was reelected president; Harold Thunell, Pitt Photo Litho Co., was elected vice president; Clarence W. McIndoe, Atlas Lithographing Co., treasurer; and Robert M. Edgar, Neyhart Printing Co., secretary.

New members of the board of directors are Edward P. Lynch, Edwards Mail Advertising Co.; Charles S. Goetz, General Press Corp.; Raymond A. Mangis, Mangis Typographic Service; Daniel N. Heeter, Heeter Lithographing Co.; and William P. Gregg, Lewis Roberts, Inc.

At entrance hall of the Minnesota Mining & Mfg. Co. Research Center in St. Paul (see December ML, page 43) with J. S. Mertle graphic arts library in background, are (l.-r.) Robert E. Rossell, president, Research & Engineering Council; Dr. Carl S. Miller, 3-M; Michael H. Bruno, research manager, LTF; Herbert P. Paschel, ML technical editor; and Mr. Mertle. The Mertle collection, viewed by editors and graphic arts leaders during the November visit, includes many important early volumes, including a second edition of Senefelder's textbook on lithography, Newton's *Opticks* (1718), Daguerre's *Daguerreotype Textbook* (1839), a copy of the first crossline halftone (1869), and many other rare and interesting items.



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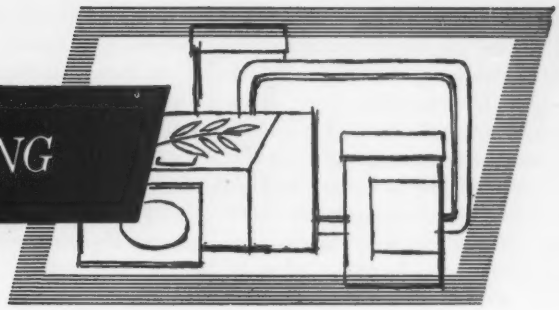

Enameling problems with

Electrolytic Tin Plate

By *Henry A. Bates*
Lilly Varnish Co.

IN THE early days of World War II, it was essential that the United States conserve its supplies of tin in every way possible. Because the can companies were the major consumers of tin as tinplate, their suppliers, the steel companies, under government sponsorship, instituted a program of construction such as never before seen in the industry.

Part of the program consisted of Bonderizing lines which produced chemically treated blackplate. This plate was used wherever soldering was not involved, such as No. 2 corn can ends, as well as for canned peas, carrots, beans, etc. The plate had to be produced, tested, approved and put into production within less than a year. Normally this would be at least a five-year project even if everything went well.

The long term part of the program was electrolytic tin plate. Some electrolytic tin had already been produced by the Crown Cork and Seal Co. in Baltimore, but the amount was small and for the company's own consumption. Commercial plate had also been produced on a pilot line at the Sheet and Tin Mill at Gary beginning about 1937.

During the years 1942-1945, Carnegie-Illinois Steel Co., Bethlehem Steel Co., Republic Steel Co., and seven other companies installed 18 electrolytic lines of various types.

The investment in these lines was many millions of dollars. They were constructed almost before a single sheet had been approved for use.

Everyone connected with tinplate felt that this was going to be the opportunity of a lifetime to eliminate all the variations that had to be tolerated with hot dip tinplate. At long last, palm oil could be done away with and everyone could enjoy the privilege of using dry tinplate. Plate was going to be uniform from coil to coil, plant to plant, and steel company to steel company. No more oxide worries for enamel adhesion, and soldering troubles would just disappear. Bran would no longer be needed, and the elimination of it would be cause for a major celebration.

Some of the Problems

Although some of these dreams came true to a degree, a complete new set of technological difficulties came into being. A summary of a few of the most aggravated cases is outlined as follows:

1. *Spots:* Everyone supposed, or at least hoped, that the first deposit of electrolytic tin would cover the base metal uniformly and completely. Hot dipped plate at its best left several dozen spots of base metal for each square foot. These spots, though not discernible with the naked eye, could be the nucleus for corrosion, and possible perforation, although it was later proved that they were not as serious as at first indicated. When they were developed by the use of ferricyanide papers, the sheet of paper would be uniformly covered with spots the size of a grain of salt, a dozen or so per square foot. If the theory of electrolytic deposition were correct, these spots would disappear when the very minimum of tin had plated. The theory had been a little optimistic.

When ¼, ½, ¾, and one pound of electrolytic tin plate was available for test, it was found that the spots had decreased in size appreciably. They were now the size of pepper on the test papers. But to offset this improvement, they had increased in number so as to be counted in the hundreds per square foot. As the weight of tin increased, the coverage improved so that at the one-pound level, the base steel exposed in number of spots was about equal to that of hot dipped tinplate. In other words, so much tin would go so far, regardless of how it was put on.

It soon became apparent that the idea of doing away with a lot of enameling or organic coatings because of improved coverage of the base metal with tin, was going to work exactly in the reverse. If sub-

From a talk presented at the 24th annual convention of the National Metal Decorators Association, Washington, D. C.

stantial amounts of tin were to be saved, the tin weight would have to be in the ½-¼ lb. range. At this weight of tin the film weight of organic coating would have to be increased for the jobs already specified for coatings, and jobs that could use plain hot dipped tin previously would now become enameled ¼ lb. electrolytic in case of certain industrial products and enameled ½ lb. electrolytic for most of the food packs.

It has since been established that for products such as evaporated milk, ¾ lb. plain electrolytic is equivalent to 1.25 lb. hot dipped, but at the time, the milk companies were very reluctant to make any change, even to one pound; in fact they were hold-outs for several years. It was very obvious from this early work that the prime objective of saving tin would be attained but it would be done only by a huge increase in the use of organic coatings. The final result has been a tremendous increase in the use of tinplate made possible by stretching the available tin supplies so much further.

Poor Soldering

2. *Soldering:* One of the most important requirements of tinplate for containers, especially for the open top food cans, is the solderability of the body blank. As the forming of the can cylinder is normally performed at a rate of 200-400 a minute, varying according to size of the can and equipment, it can readily be seen that any slowing up of the flux action and acceptance of the solder by the tinplate blank would be fatal to the success of the operation.

Early in the production of electrolytic tinplate, it was discovered that certain plates were not soldering well. Also, the lower the tin weight the poorer the solderability. It was soon found that plate produced by the stannous sulphate or acid method was the poorest for soldering, while the alkaline or potassium stannate was best. The chloride or DuPont process seemed to produce plate in between these extremes. Through the correction of certain properties of these plates, which will be discussed in later sections of this article, and by making changes in soldering practice, the solderability of all plates became acceptable for the industry.

3. *Enamel Adhesion:* The question of enamel adhesion came up early in the game, although it was overlooked at the very beginning. It was found that, as with solderability, plates made with various electrolytes gave different results in enamel adhesion. In this case, oddly enough, the poles were reversed. The alkaline plate was the poorest, and the acid plate the best, with the chloride type again being in between. This was probably very fortunate, because it gave all the steel companies a job to do and quick. No one type of plate was even close to being acceptable for the trade as it was first produced. Eventually these inequities were eliminated and all electrolytic plate became basically equal.

4. *Matte vs. Bright Plate:* Originally it was supposed that the industry would accept matte-finish plate instead of the bright finish they were used to in hot dipped plate. They steel companies soon found that this was not going to be the case. It was immediately apparent that the tin deposit, which comes out of the electrolytic bath as a matte or dull finish, would have to be reflowed to bring the surface to a shiny condition comparable to hot dipped.

This was accomplished by bringing the strip to the melting point of tin, approximately 448° F., for the least fraction of a second. Overmelting caused the tin to flow into rivulets, break continuity, and turn color. Various means were used to do the heating but little difference could be found in plate performance between them. The melting operation to a bright finish aided to some degree the washing of the plate at the steel mill and also in flow of the solder on the can making line.

5. *Tin Smudge and Stain:* One of the early characteristics of electrolytic plate was the presence on the surface of tin smudge, dust or stain. Different observers called it different things but no one was in favor of it.

It was once thought that the tin smudge or dust was due to a spongy structure of the tin as it was deposited on the surface of the steel, the melting of the tin tending to loosen the spongy structure and leave it in a dusty or smudgy condition. The stain, usually accentuated by the bake during enameling operations, might have been the result of contamination on the tin lines and subsequent oxidation by the melter or reflower. Both of these observations are opinions of the writer and would be subject to correction by the electro-metallurgists of the tinplate manufacturers.

In any case, the effect on the plate was disturbing as the soldering and enamel adhesion qualities becamee questionable. The correction of these difficulties was taken care of primarily by better operation of the tin lines and improved washing conditions.

Sheet Must Be Clean

6. *Washing and Rinsing:* This operation was so important to the production of satisfactory plate, that special mention should be made of the problem. It was found, through sad experience, that an acceptable surface could not be obtained until the sheet was chemically clean. The effect of the most minute quantities of impurities, either from the tin bath or the wash water, was most detrimental to uniformly good plate. It made little difference how many gallons of Ohio River or Lake Michigan water were used, if a deposit or residue was left on the plate, variable results were obtained, usually bad. This applied to enamel adhesion problems as well as solderability. The experience of all the steel mills was the same.

It was only when they were convinced that the final rinsing had to be thorough and with distilled or condensate water, that the plate produced from all the mills became uniformly good and acceptable in regard to enamel adhesion and soldering properties. Other considerations kept the quality problem on the fire for a long time.

7. *Chemical Treatment:* It was found that a light chromic acid treatment, or a modification of it had a beneficial effect on enamel adhesion. It helped to iron out inequities which were bound to creep in during the production of large quantities of plate. However, overtreating of plate was detrimental to the quality, par-

ticularly for soldering. Also, chemical treatment over improperly washed plate was harmful. In other words, the use of a chemical treatment to disguise poor plating or washing operations will lead to the production of unsatisfactory plate. The use of a chemical treatment on plate properly prepared is of benefit.

8. *Oiling:* The problem of oil versus dry plate and if oil, what type, occupied the time and thought of more persons than any other subject. The electrolytic method of tinning offered to the maker the first real opportunity to do away with palm oil. The use of palm oil in the hot dip tin bath and subsequent removal by branning has been going on for years, ever since tinplate was first made.

The use of the oil had been necessary to prevent oxidation of the tin surface at the hot dip pot, also to preserve the tin surface during storage. The oil and accompanying bran particles were held to blame for nearly all difficulties in the application of enamels. Now at last, the use of palm oil, as well as the bran, could be eliminated for good. Dry plate was what everybody hoped to adopt as the universal plate. Fortunately, opinion was divided and caution was exercised to a degree sufficient to prevent the entire industry from adopting dry plate.

Oil Still Needed

It was found that the oil, even in a light film, served functions in the use of tinplate other than to create eyeholes and otherwise interfere with good enameling practice. It not only helped to prevent oxidation of the tin surface but it acted as a lubricant on the path that the sheets took on their way to becoming usable objects in the industry. Later, it was found to be necessary to promote the offset properties during litho operations.

Phenolic lacquers had been generally adopted for use in certain packs, primarily tuna fish, meats and industrial products. This type of lacquer is extremely sensitive to alkalinity, oxide, or other types of contaminants. Dry plate had been produced in fairly large amounts but had not been adopted universally when it was found that phenolics would not perform satisfactorily on dry plate because of the oxidation. Dry plate was immediately abandoned for oiled plate.

Here again opinion was divided between cottonseed oil, palm oil, and dibutyl-sebacate. The latter chemical had been used in limited quantities with encouraging results. However, there was some indication that the oil had enough vapor pressure to evaporate over a period of months and lose its effectiveness. Without any particular agreement being reached, the use of cottonseed oil was the best compromise for all concerned. The industry then started out on a long program of oiling studies and method of application which is still going on. After more than 10 years of work, the oiling issue is still not decided to everyone's satisfaction.

The most recent oiling material which has been considered for this all-important job is di-octyl sebacate. This material seems to have the same properties as di-butyl sebacate with considerably lower vapor pressure. As D.O.S. would vaporize much more slowly then D.B.S., storage life of the tinplate would be increased, a property in which D.B.S. was deficient. Very thorough testing on a laboratory scale, followed by extensive production runs, indicated that considerable advantage could be gained by its adoption. Because of these favorable results, several companies approved D.O.S. oil for their use. Tinplate manufacturers, always eager to produce a universal type of product, pushed for its general use by everyone.

Just as some of the mills were well started on the project, production-wise, the roof evidently fell in, as pinholes became a major headache again. Pinholes were even occurring with such standard coating materials as "C" enamel. The use of pinholes in the industry is very limited; about the only persons benefitting by their presence are service personnel of the coating manufacturer and the steel company involved. Pinholes keep them in a job like nothing else will.

The reasons for pinholes are very simple, but the correction is considerably more difficult. There are several types of pinholes, which makes it all the more interesting. The two most common types are the eyehole, with a nucleus of oil, dirt, dust, etc., about the size of a pin head, and the salt type which is all over the area, looking like salt dusted on the sheet. Usually, the copper sulphate test shows that the tin is covered by enamel in all cases.★

(Concluded Next Month)

Teenage officers **of a Philadelphia Junior Achievement company sponsored by Crown Cork & Seal Co., learn about metal decorating from Harvey Tull (seated) Philadelphia sales manager for Crown. Behind Tull is Hugh Monaghan and to the right is Paul Griffith, both working with the J. A. company, which is selling attractive, decorated banks made from six-ounce seamless aerosol cans as its project. Finishes are in various pastel shades.**

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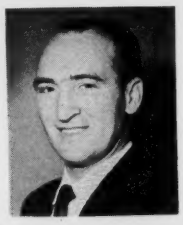

Care of the Offset Blanket

By *Frank Arbolino*

PACKING and patching blankets is an art frequently overlooked in the litho shop. Often the life of a plate on an offset press depends on the method used in packing the blanket and plate cylinders.

We hear of plates going sharp, halftones filling in, and presses streaking, when in reality the cause lies in the packing of the blanket cylinders. In printing four-color process it should be remembered that the failure to patch a low or weak spot in the blanket cylinder can mean the difference between a good job and a poor one.

Putting more squeeze on the impression cylinder or adding it over the entire surface to make up for weak areas of the blanket is the worst offense. True, on very short runs you can get away with doing this trick, but it is the easy and wrong way.

Low or weak spots on a blanket cannot be made to print by adding full size packing without adding excess to the portions of the blanket which have printed satisfactorily in the first place.

When printing large solids it is very tempting to put extra packing under the blanket over the entire area because of the difficulty of adding individual patches without having the edges of the patches show in the print. This can be eliminated by using several tissues of smaller thickness to make up for the weakness and cutting each slightly smaller than the one previous.

Another way to keep the edge of a patch from showing is to tear the tissue instead of cutting it. This has a tendency to feather and soften the print at the packing paper's edge.

Swollen Blankets

Swelling blankets with water, kerosene or solvents to correct low spots should be discouraged whenever possible. It is almost impossible to judge the swelling exactly and often when .002 of an inch would be sufficient, it is apt to swell from .006 to .009.

The excess pressure will cause the plate to fill in and grease in the area where the blanket is swollen. This will eventually wear the image. This is especially true when using grainless or presensitized plates. Another drawback to this kind of blanket patching is that it is not permanent, because the fluid you use will dry out and the area may have to be patched again the next day. There is also danger that the fluid—generally kerosene or turpentine— will ruin the packing sheets and rust the cylinders.

New Blankets

When putting on new blankets it is a good practice to use a micrometer to gauge the thickness of the blanket. The actual thickness of the blanket depends to some extent on the tension or stress it is subjected to when tightened onto the cylinder, and excess tightening of the blanket may often reduce its thickness by several thousandths of an inch and cause the surface to be uneven. Many times blankets are thought to be weak in the center because of excess stretching.

Knowing how much to tighten a blanket is a knack which can be acquired only through experience and knowing your own strength. Always use the wrench supplied by the manufacturer of the press without adding to the length to get extra leverage. (Avoid the use of a length of pipe and use only hand pressure.) Do not stand on the wrench.

When putting a new blanket on the press it is best to pull up only the slack and then run the press with pressure applied for several revolutions, after which the slack can be taken up again. This can be repeated several times. The use of a tension or torque wrench is very practical for this purpose.

After you have a color OK and your makeready has been completed, it is a good practice to mark the blanket reel according to its relation to the cylinder bearer. In other words, the tooth which seats the ratchet should be marked, so if for any reason you need to take the blanket off you will be able to get it back into the same position quickly.

The importance of getting the blanket back into its original position on the cylinder cannot be stressed too much, for in color work the register-

(*Continued on Page* 121)

New CHEMCO TYPE-X Powerlith Film

has faster emulsion speed, makes better halftones

New Type-X Powerlith has the fastest lithographic emulsion you can buy. This faster film gives superior halftones because it requires less detail-destroying flashing.

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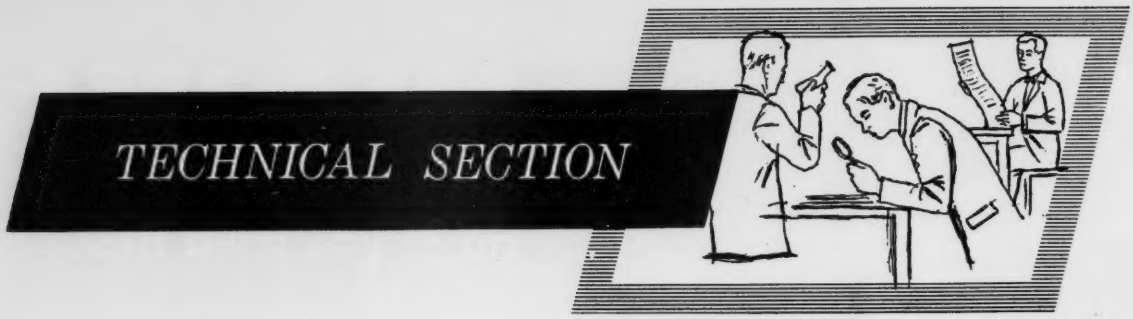


Map Papers with Synthetic Fibers

SYNTHETIC fibers added to the paper stock greatly enhance the strength characteristics of map paper, according to a National Bureau of Standards evaluation for the Army Engineer Research and Development Laboratories. The report indicated that, of the fibers tested, polyesters give the best dimensional stability—a prime requisite in military map paper. Paper containing polyamide fibers has excellent folding, tearing and bursting strengths, but low dimensional stability, according to the evaluation, which was made by comparing test results with results from similar tests on conventional paper stocks.

Tests for dimensional stability, folding endurance, and bursting and tearing strengths were made on specimens of three experimental handsheets and two commercially produced papers. Results show that a polyester-cellulose sheet has high dimensional stability and better strength properties than commercial map paper.

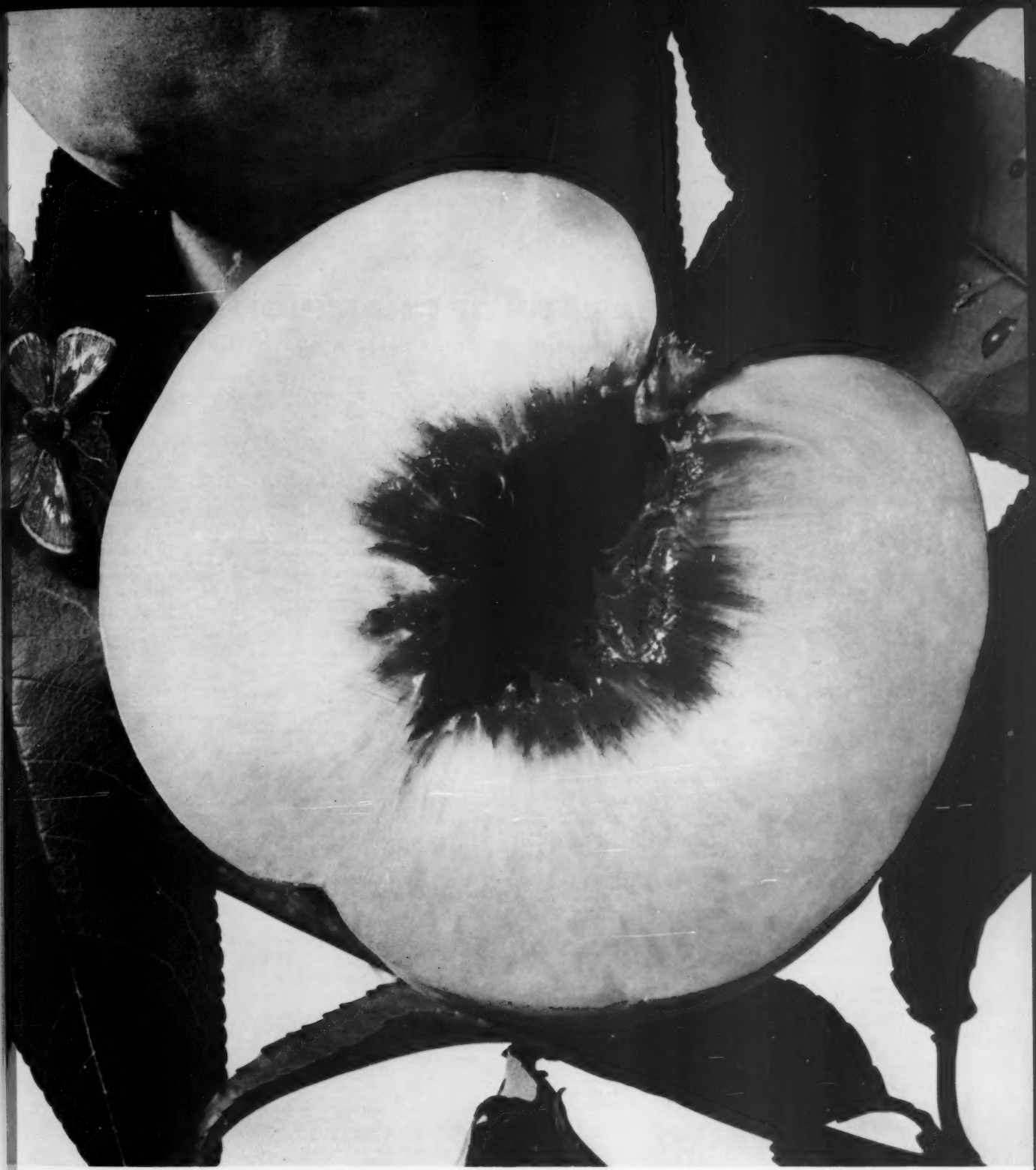
For many years the Bureau has conducted research on the properties of paper and related materials. In previous experiments a dimensionally stable paper (that is, a paper with low moisture expansivity) was developed by laminating two thin sheets to a backing of polyester film. G. L. McLeod of the Bureau staff undertook the present study to find out whether synthetic fibers with less affinity for water than cellulose could impart the desired moisture stability to map paper.

Also, while cellulose is and probably will remain the backbone of the paper industry, growing interest is being displayed in the use of synthetic fibers to improve papers.

Initial attempts to prepare handsheets from a suspension containing 100 percent synthetic fibers were unsuccessful. The sheets tore and disintegrated when removed from the mold. A suspension was then prepared containing cellulose fibers and synthetic fibers in a 1-to-3 proportion. From this suspension it was possible to produce handsheets that could be manipulated and treated with an acrylic binding agent. After treatment, the sheets were dried for an hour in a forced-air oven, and cured in a flat-bed press at 160° C with a pressure of 300 lb/in.^{2} for 45 seconds. The synthetic fibers in the three different handsheets were polyester, polyacrylate and polyamide (nylon).

Similar tests were conducted on

National Bureau of Standards **investigation finds that the strength properties of experimental map paper are considerably enhanced by the addition of synthetic fibers to the paper stock. To determine these properties, one specimen is placed in NBS apparatus (left) which measures moisture expansivity of paper; another specimen is inserted in apparatus which measures folding endurance (center) and a third specimen is positioned in machine (right) which measures bursting strength.**



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Boston — John Carter & Co., Inc.; The K. E. Tozier Co.*
Springfield — John Carter & Co., Inc.
Worcester — John Carter & Co., Inc.

MICHIGAN
Detroit — The Whitaker Paper Co.
Grand Rapids — Central Michigan Paper Co.

MINNESOTA
Minneapolis — C. J. Duffey Paper Co.; Inter-City Paper Co.
St. Paul — C. J. Duffey Paper Co.; Inter-City Paper Co.

MISSISSIPPI
Jackson — Jackson Paper Co.
Meridian — Newell Paper Co.

MISSOURI
Kansas City — Carpenter Paper Co.; Midwestern Paper Company‡
St Louis — Acme Paper Co.; Shaughnessy-Kniep-Hawe Paper Co.

MONTANA
Billings — Carpenter Paper Co.
Great Falls — Carpenter Paper Co.
Missoula — Carpenter Paper Co.

NEBRASKA
Grand Island — Carpenter Paper Co.
Lincoln — Carpenter Paper Co.
Omaha — Carpenter Paper Co.†

NEW HAMPSHIRE
Concord — John Carter & Co., Inc.

NEW JERSEY
Newark — Central Paper Co.
Trenton — Central Paper Co.

NEW MEXICO
Albuquerque — Carpenter Paper Co.

NEW YORK
Albany — Hudson Valley Paper Co.
Binghamton — Stephens & Co., Inc
Buffalo — Hubbs & Howe Co
Jamestown — The Millcraft Paper Co
New York City — Aldine Paper Company‡; Forest Paper Co., Inc.; Holyoke Coated & Printed Paper Co.*; Milton Paper Co., Inc.; Paper Sales Corporation‡; Pohlman Paper Co., Inc; Reinhold-Gould, Inc.; Royal Paper Corporation; The Whitaker Paper Co.; Charles W. Williams & Co.*
For Export — Bulkley Dunton (Far East)†; Bulkley Dunton S. A.†; Champion Paper Corp., S.A.†; Champion Paper Export Corp.†
Rochester — Genesee Valley Paper Co.

NORTH CAROLINA
Asheville — Henley Paper Co.
Charlotte — The Charlotte Paper Co.
Raleigh — Epes-Fitzgerald Paper Co.

OHIO
Akron — The Millcraft Paper Co.
Cincinnati — The Cincinnati Cordage & Paper Co.; The Queen City Paper Co.; The Whitaker Paper Co.
Cleveland — The Millcraft Paper Co.
Columbus — Sterling Paper Co.
Dayton — The Cincinnati Cordage & Paper Co.
Mansfield — Sterling Paper Co.
Toledo — The Millcraft Paper Co.

OKLAHOMA
Oklahoma City — Carpenter Paper Co.
Tulsa — Beene Paper Co.; Taylee Paper Company

OREGON
Portland — Blake, Moffitt & Towne; Carter, Rice & Co. of Oregon

PENNSYLVANIA
Allentown — Kemmerer Paper Co. (Division of Garrett-Buchanan Co.)
Lancaster — Garrett-Buchanan Co.
Philadelphia — Garrett-Buchanan Co.; Matthias Paper Corp.*; Paper Merchants, Inc.; Whiting-Patterson Co., Inc.
Pittsburgh — The Whitaker Paper Co.
Reading — Garrett-Buchanan Co.

RHODE ISLAND
Providence — John Carter & Co., Inc.

SOUTH CAROLINA
Columbia — Epes-Fitzgerald Paper Co.

SOUTH DAKOTA
Sioux Falls — Sioux Falls Paper Company

TENNESSEE
Chattanooga — Bond-Sanders Paper Co.
Knoxville — The Cincinnati Cordage & Paper Co.
Memphis — Taylee Paper Company
Nashville — Bond-Sanders Paper Co.

TEXAS
Amarillo — Kerr Paper Co.
Austin — Carpenter Paper Co.
Dallas — Carpenter Paper Co.
El Paso — Carpenter Paper Co.
Ft. Worth — Carpenter Paper Co.
Harlingen — Carpenter Paper Co.
Houston — Carpenter Paper Co.; Southwestern Paper Co.
Lubbock — Carpenter Paper Co.
San Antonio — Carpenter Paper Co.

UTAH
Ogden — Carpenter Paper Co.
Salt Lake City — Carpenter Paper Co.

VIRGINIA
Norfolk — Epes-Fitzgerald Paper Co.
Richmond — Epes-Fitzgerald Paper Co.

WASHINGTON
Seattle — Blake, Moffitt & Towne; Carpenter Paper Company
Spokane — Blake, Moffitt & Towne; Spokane Paper & Stationery Co.
Tacoma — Blake, Moffitt & Towne
Yakima — Carpenter Paper Co.

WEST VIRGINIA
Huntington — The Cincinnati Cordage & Paper Co.

WISCONSIN
Milwaukee — Dwight Brothers Paper Co.

CANADA
Toronto — Blake Paper Limited

*BOX WRAP GRADES ONLY
†PRINTING PAPERS & BOX WRAP GRADES
‡PAPETERIE GRADES

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machine-made paper containing 40 percent synthetic fiber, 40 percent cellulose rag fiber, and 20 percent acrylic binder. Only two of the synthetic fibers, polyester and polyamide, were used in the machine-made paper.

In general, test results of the handsheets and the machine-made paper follow the same pattern. The polyester-cellulose sheets are superior in dimensional stability to moisture, and have higher bursting, folding and tearing strengths than does regular map paper. The polyacrylic-cellulose sheets, tested only in the form of experimental handsheets, are superior to the polyamide-cellulose and the all-cellulose sheets in dimensional stability but inferior to the polyester-cellulose sheets. The polyamide-cellulose paper has the lowest dimensional stability of all the papers tested, which makes it unsuitable for map paper. However, because of its exceptional folding endurance and high tearing strength, this paper may prove to be valuable for other purposes in the future.

No difficulties were encountered in printing on the synthetic-fiber papers, in either black and white, or in the regular five-color lithographic process used for Army maps. The smoothness and opacity ratings of the synthetic fiber sheets are lower than those of regular map paper, but these are minor deficiencies which can easily be overcome. That the synthetic-fiber papers have less dry tensile strength than commercial map paper is attributed to the low fiber-to-fiber bonding in the synthetics. Dry tensile strength, however, is a relatively unimportant factor in papers used for military maps.★

Double-Coated Papers

by roll and trailing blade coaters on the machine

Much publicity has been given to a method of producing enamel printing paper by a combination of roll coating and trailing blade coating right on the paper machine in one continuous operation. Harold Murtfeldt, vice president of Consolidated Water Power & Paper Co., last month issued a special report on this subject and what it will mean to the printer and lithographer, from which the following comments have been abstracted:

PRIOR to Consolidated's introduction of roll coating on the paper machine the only way to make enamel papers was in a slow multiple step process on narrow equipment operated independently of the paper machine.

Because of the extra steps, restricted widths and slow speed of this off-the-machine process, enamel papers were priced much higher than uncoated printing papers of that day. In 1934, Consolidated Water Power & Paper Co., produced the first commercial paper made on the paper machine at paper machine speeds in one continuous operation.

This on-the-machine process, applies, by means of a series of coating rolls, a special coating composition simultaneously to both sides of the full width paper web as it is made on the paper machine. It is in effect the principle of offset printing applied to papermaking. For the first time in 1934 coated papers were made available at the price of uncoated papers.

As Consolidated gained knowledge and experience, enamel papers of continually improved quality were produced on its machines. Today, true enamel papers in a full complement of basis weights and qualities from the finest four-color illustration to the simplest black and white halftones are made on the paper machine. As a result, enamel papers of the highest quality and value are available at a substantial cost savings over enamel papers produced off the paper machine.

Trailing Blade Coating

In the trailing blade coating process (off-the-press) a quantity of liquid coating composition is applied to the uncoated paper surface and the excess removed by means of a flexibile blade bearing against the paper. The use of a flexible blade makes it possible to apply coating in a very smooth application.

To date the commercial application of the trailing blade process has been limited to off-the-machine coating of lightweight publication papers. The quality of these papers has been inferior to coated papers made on-the-paper-machine by the roll coating process.

From a mechanical standpoint the trailing blade coater has greater utility than other off-the-machine coating methods in three respects:

1. It can take full width reels as they come from the paper machine.
2. Both sides of the paper can be coated in one continuous operation.
3. The unit can be operated at high speeds.

Research has shown that, under controlled laboratory conditions, trailing blade coating as the second application in a double coating operation may make possible an improved printing surface.

Combining the Methods

The speed, width and continuous coating application of the trailing blade coater make it mechanically possible to install a unit directly on the paper machine in tandem with a Consolidated roll coater. This is the most efficient use of the trailing blade, because it eliminates all extra manufacturing steps.

The result might be double coated papers of improved printability at no increase in price. Two years of experimenting with a 72″ off-the-ma-

(*Continued on Page* 115)

This insert was lithographed with Speed King Jet Halftone Black, Warm Red, Medium Yellow and Syan Blue. The Green is a combination of the Yellow and the Blue.

Speed King
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And here is an entirely new concept of ink quality and press performance! Here, in IPI Speed King inks, is everything you need for prestige lithography. Speed King inks have high color strength ... always clean, clear and brilliant, wet or dry. They stay press-ready until used, set in seconds, dry fast and bind beautifully. Perfect for straight color work, process, special colors, black and white — even cartons. Get the whole wonderful Speed King story from the man from IPI!

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TECHNICAL BRIEFS

These abstracts of important current articles, patents, and books are compiled as a service of the Lithographic Technical Foundation, Inc. They represent statements made by the authors and do not express the opinions of the abstractors or of the LTF.

Since some of the abstracts are from abstract journals, LTF cannot furnish photostats of all of the original articles. If the title is marked with an asterisk (*), LTF has no further information than that contained in the abstract itself. Inquiries about these items should be sent direct to the source that is named. If you want copies of U. S. Patents, write direct to the Commissioner of Patents, Washington 25, D. C. Send twenty-five cents for each patent decided. Make checks or money orders payable to "Treasurer of the United States." British patents may be obtained for forty-five cents from the Patent Office, 25 Southampton Buildings, London, W. C. 2, England, or as in the case with all foreign patents, they may be obtained as photoprints from the U. S. Patent Office, Washington 25, D. C.

If the title of the abstract is *not* marked with an asterisk (*), LTF can supply photostats of the original article. *NOTE*: When placing orders for such photostats, please give the *COMPLETE* description of article wanted—TITLE, AUTHOR, PUBLICATION, and PAGE NUMBERS. When articles appear in LTF's publication *Research Progress* as well as other publications, *Research Progress* will be sent The charge for copies of *Research Progress* is thirty cents to LTF members and one dollar to non-members plus three cents postage. The charge for photostats is $1.00 per page (check abstract for number of pages) plus three cents per page postage. Postage charge for orders from places other than Canada and the United States or its territories and possessions is ten cents per page of photostats or ten cents per copy of *Research Progress*. Orders from companies or individuals who are not members of LTF cannot be filled until payment is received. Orders with payment enclosed receive immediate attention.

LTF also has mimeographed lists of (1) "Periodicals Abstracted by the Research Department" and (2) "Books of Interest to Lithographers." These are available for twenty-five cents each in coin or U.S. stamps. All inquiries concerning these lists and photostats of original articles (not marked with an asterisk) should be addressed to: Lithographic Technical Foundation, Inc., Research Department, 1800 So. Prairie Ave., Chicago 16, Ill.

MASKING, COLOR SEPARATION FOR TRANSPARENT AND REFLECTION COPY. John M. Lupo, Jr. *Modern Lithography*, Vol. 26, No. 7, July 1958, pp. 28-33, 122, 7 pages. Filter factors are explained, along with color temperature of light, and Hue, Value, and Intensity of color. Table showing exposures, Density Range and Gamma of a set of separation negatives is included. D log E curve is explained. Balanced separation negatives are discussed. The term masking is defined. Charts showing positive and negative mask systems are shown. Types of masks and their uses are mentioned. These are as follows:

Positive mask, Negative mask, Highlight mask, Undercolor removal mask. LFT Color Chart is mentioned in connection with ink hue and purity.

PHOTOTYPESETTING. Anonymous. *American Printer and Lithographer*, Vol. 139, No. 6, June 1958, pp. 21-25, 5 pages. Phototypesetting and related photo-lettering methods have been cast as sturdy protagonists in dramatic industry-wide developments. A composing rooom in film has become a reality for offset-lithography. In future years, photocomposition may also enter into partnership with letterpress. Here, many currently available models are reviewed, Fotosetter, Linofilm, Monophoto, ATF Typesetter, Friden Justowriter, Filmotype, Photon, Typro, Vari-Typer, Protype, Commercial Rectograph, Teletypesetter, Artype, Fototype.

ACME SCANNER INTRODUCED FOR COLOR SEPARATION. Anonymous. *Gravure*, Vol. 4, No. 7, July 1958, pages 26-27, 2 pages Announcement is made of the first commercial sale of an Acme Color Separator to the Buffalo Courier-Express, by Acme Teletronix, Division of NEA Service Inc., 1200 W. Third St., Cleveland. This new equipment scans either transparent or opaque 8 x 10" copy in 30 minutes to produce a set of color corrected continuous tone negatives or positives. The amount of color correction is adjustable.

MEASUREMENT OF COLOR DENSITY. Jacqueline M. Fetsko. *Gravure Technical Association Bulletin*, Vol. IX, No. 1, June 1958, pages 51-54, 4 pages. The author describes experiments which showed that the measurement of color density varied with illuminating and viewing angles. For good correlation to estimates made by observers, photo-electric measuring instruments should illuminate and view the sample in the same manner as used by the observers.

A NEW COLOR SCANNER—THE "SCANATRON". J. F. Crosfield. *Gravure Technical Association Bulletin*, Vol. IX, No. 1, June 1958, pp. 67-70; 4 pages. The Scanatron uses one cathode ray raster as fine as 1000 lines per inch, beam split to scan three color separation negatives. Four positives are made separately in 40 minutes. A new development control instrument, the Gammatron is also described.

THE H P K AUTOSCAN. G. E. Messenger. *Process*, Vol. 65, No. 772, April 1958, pp. 127-8, 2 pages. A device that may be described as a reproduction camera for color work. The general illumination of the copy is replaced by a scanning light. The intensity of the scanning light is varied to influence the exposure on the plate. Variable point light makes possible considerable control of color separation undercolor removal, and tone rendering. Produces color and tone corrected separation negatives direct on films or plate.

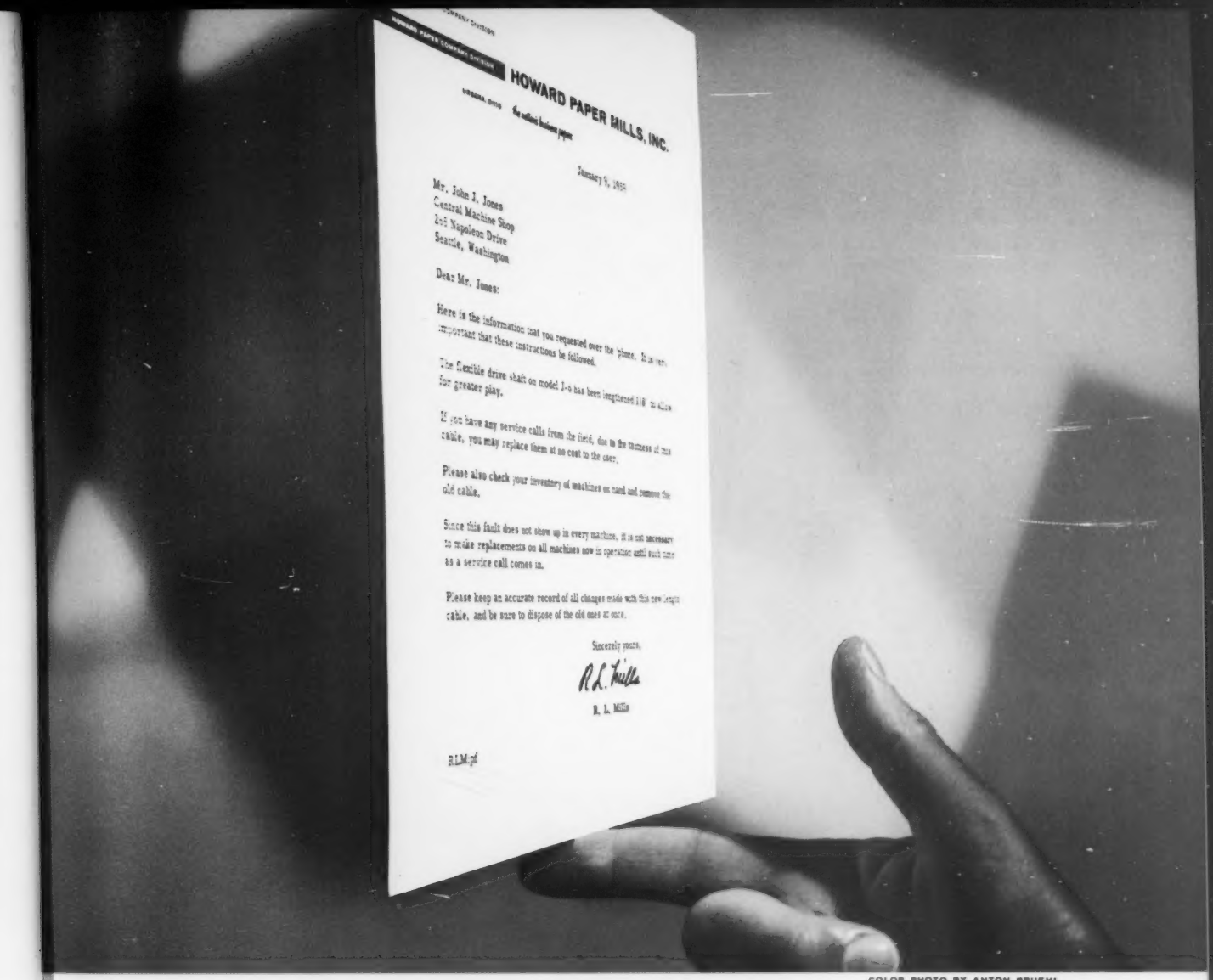
LUDLOW READY TO PLACE BRIGHTYPE CONVERSION PROCESS ON MARKET. Anonymous. *Printing Magazine*, Vol. 82, No. 5, May 1958, pages 86-7, 2 pages. Brightype is a method which converts any combination of letterpress printing material directly into photographic images for any printing process. The chief distinguishing feature of Brightype, as compared with other methods of converting relief images for photomechanical reproduction, is the bypassing of the prooving operation. Brightype's basic end product is a transparent film positive made in one direct step by photographing type and plates in a relief form. (illustrated)

A REVIEW OF PHOTOCOMPOSITION SYSTEMS. Anonymous (staff prepared). *Printing Production* (PEE), Vol. 88, No. 9, June 1958, pages 64-68, 5 pages. A factual summary of each of the phototypesetting and photolettering machines for printers and lithographers. The machines illustrated and described include the ATF Typesetter, Fotosetter, Linofilm, Monophoto, Photon, Filmotype, Foto-Riter, Headliner, Protype and the Typro machine.

Planographic Printing Processes Paper and Ink

SUMMER WEATHER PROBLEMS: PAPER. Rohn Blohm. *Graphic Arts Monthly*, Vol. 30, No. 5, May 1958, pp. 66-74, 9 pages. A discussion of the influence of higher temperatures and humidity conditions on printability of lithographic papers and inks. The use of the LTF Paper Hygroscope is recommended. Hanging of paper or running through a press blank are methods of conditioning paper when summer conditions are severe. Use of multi-unit presses rather than single unit presses reduces the time that paper is in contact with pressroom air in multicolor printing. Fountain solution

(*Continued on Page* 112)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Central Machine Shop
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Dear Mr. Jones:
Here is the information that you requested over the phone.
Please keep an accurate record of all changes made with this new
cable, and be sure to dispose of the old ones at once.
Sincerely yours,
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R.L.M:pf

COLOR PHOTO BY ANTON BRUEHL

How to strike a fine balance in letterheads

THERE ARE MANY letterhead papers more expensive than HOWARD BOND and even more that are cheaper. HOWARD is expressly designed to place in balance the degree of prestige a good letterhead deserves, together with a price that makes it practical for everyday, all-purpose use.

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Then ask, "How much?" We believe the balance between obvious value and sensible economy will make HOWARD BOND your letterhead choice from now on.

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We'd be pleased to send you samples of our eight finishes and two tints

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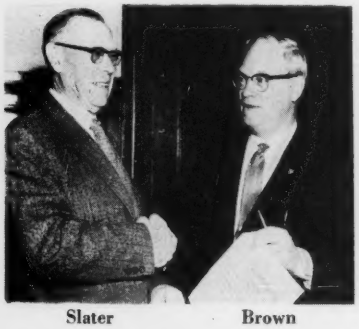
NEWS about the TRADE

ALA—ITU to Cooperate

An agreement calling for "immediate cooperation" was signed last month by the International Typographical Union and the Amalgamated Lithographers of America. The agreement was signed, following a meeting at the Hotel Astor in New York, by the two union's presidents, Elmer Brown, ITU; and Francis P. Slater, ALA.



Slater Brown

The 100,000-member ITU and the 36,000-member ALA have been involved in jurisdictional disputes for a number of years. Last month's action, hinted at in the December issue of *Modern Lithography* (page 56), provides for the setting up of a joint coordinating committee composed of two representatives from each union and a joint fund of $100,000 for mutual activity in graphic arts.

Kenneth Brown, president of Local 12, ALA, Toronto; and Jack Wallace, ALA vice president and director of organizing, will represent the Amalgamated on the joint committee. ITU had not named its representatives as *ML* went to press.

It is anticipated that the two organizations will carry on correlated activities in organizing employees in the printing and lithographic industries. Cooperation may also be possible in collective bargaining activities.

The Amalgamated withdrew from the AFL-CIO last August because of jurisdictional disputes over the organizing of lithographic workers.

The *New York Times*, on Dec. 7, reported that both unions said they "hoped their action would lead to similar agreements among all unions in the graphic arts." The same paper also quoted Mr. Slater as saying his union "would be willing to make similar pacts with other graphic arts unions but that the accord did not presage a return by the lithographers to the AFL-CIO."

•

Awards Closing Date Near

Closing date for entries in the 9th Lithographic Awards Competition and Exhibit is Jan. 13.

Entry blanks can be obtained from the Lithographers and Printers National Association, 597 Fifth Ave., New York; or 127 N. Dearborn St., Chicago. Entries should be submitted to the LPNA Awards Competition, c/o George McLaughlin, New York Trade School, 312 East 67th St.

LTF Picks Director

The Lithographic Technical Foundation announced January 5 the appointment of William H. Webber as executive director of the research organization, succeeding the late Wade E. Griswold. Mr. Webber's selection concludes a six-month search by the LTF Board.

Mr. Webber has wide experience in government and the graphic arts. Complete details and a photograph will appear in the February MODERN LITHOGRAPHY.

George Kindred Retires

George C. Kindred, one of the best known leaders of the lithographic industry, announced his retirement Dec. 31, after completing his 30th year with Kindred, MacLean & Co., which he founded. Mr. Kindred, president of the company, a division of the Progress Lithographing Co., said he has no immediate business plans. He and his wife will start on a trip around the world this month. The first leg of the trip will be as passengers on the inaugural flight of American Airlines' Boeing Jet 707 to Los Angeles.

George C. Kindred

Mr. Kindred was president of POPAI, which he was instrumental in organizing, president of the Metropolitan Lithographers Association, treasurer of LNA (now LPNA) and is presently treasurer of the Lithographic Technical Foundation.

•

Davis Delaney Adds Offset

Davis Delaney, one of the largest publication printers in the East, recently added a two-color Miehle 25 x 38″ offset press. Robert B. Davis, vice president of the New York firm, told ML his company wanted to have the advantages of a combination shop, while still remaining preponderently letterpress.

NEW

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ILFORD!

A new base...
a new emulsion in

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to set a new standard of lith film quality!

THE BASE. The special SR (Shrink Resistant) base of the new Formalith means true *dimensional stability*, plus three other important working qualities: it will not kink, it scribes beautifully and it cuts easily. No other lith film base offers *all* these advantages in such high degree, yet Formalith is *not* premium priced!

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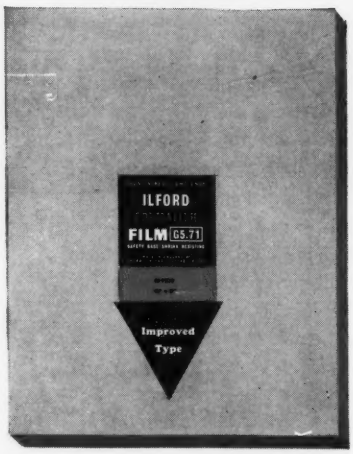
New Formalith G5.71 (.005" base) and G3.71 (.003" base) are now available from your regular graphic arts supplier.



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Hartsuch Rejoins LTF

Dr. Paul J. Hartsuch, widely known lithographic authority, has rejoined the research staff of the Lithographic Technical Foundation as technical assistant to Michael H. Bruno, research director. During the years 1945 to 1950 he was on LTF's research staff as supervisor of the metals and surface chemistry division.

Dr. Paul J. Hartsuch

His appointment was announced in a joint statement by W. F. Cornell, president of the Printing Ink Division of the Interchemical Corp.; and Andrew Donaldson, Jr., general manager of the Strobridge Lithographing Co., Cincinnati, and president of the Foundation.

In his former post with LTF, Dr. Hartsuch conducted research in plate treatments, gums, etches and bi-metal plates. He was responsible for much of the work done to develop the Dilute-Cronak and Brunak surface of cellulose gum, improved techniques using gum arabic, and the LTF Non-Fuming Chromium etch for bi-metal plates. He also initiated work at LTF on the use of radioactive isotopes in lithographic research.

In 1950, Dr. Hartsuch joined International Printing Ink as a lithographic consultant. He was active in the introduction of IPI's Tri-Metal plates and was later involved in research on lithographic inks, including factors that affect water pick-up, special driers and the mechanism of ink drying. In cooperation with LTF, he also was instrumental in developing the first of the "Balanced" process inks which are credited with doing much to simplify and improve photographic masking and process color reproduction.

Recently he has been investigating what effect changes in the hues and cleanliness of sets of process inks have on the cleanliness of the in-between colors (violets, blues, greens, oranges and reds).

Dr. Hartsuch's academic background includes a B.S. degree in chemical engineering and a professional degree of chemical engineer from Michigan State College; and M. S. and Ph.D. degrees in physical chemistry from Chicago University. He has taught chemistry at the Case School of Applied Science, and was a professor of chemistry and later chairman of the department at Central YMCA College in Chicago.

He is the author of LTF's publication, "Chemistry of Lithography," and its accompanying laboratory manual, as well as a number of scientific papers and articles. He is also well-known as a speaker on lithographic problems and developments before such organizations as the National Association of Photo-Lithographers, National Association of Litho Clubs and Southwest Litho Clinic.

•

Named Hall Vice President

Col. H. R. Kibler, immediate past president of Printing Industry of America, was recently appointed administrative vice president of the W. F. Hall Printing Co. and its subsidiaries in Chicago. Col. Kibler has been associated with the Hall organization since 1937, except for a period during World War II.

Following his return at the end of the war, he was made assistant to the president, a function he will continue to perform. As administrative vice president, Col. Kibler will be in direct charge of the personnel division, public relations and suggestion system. He is also a member of the executive council of the Hall Co. and its subsidiary, Chicago Rotoprint Co.

•

John H. White Dies

John H. White, president of the Calvert-Hatch Co., and vice president of the Reserve Lithograph & Printing Co., died November 27 in Cleveland.

To Hold Cost Conference

The Cost, Accounting & Financial Management Committee of the Lithographers and Printers National Assn. has scheduled its Second Regional Cost Conference for Feb. 4, at the Sherman Hotel in Chicago.

The conference will be held under the chairmanship of Ralph F. Stephen, The Meyercord Co., Chicago. It will be concerned with better and broader accounting methods to help management increase its profits, but will be on an informal basis, employing the workshop method of discussion groups in place of formal speakers.

Recently, the Cost Committee released two publications to LPNA members, including "The Estimator and His Job" and "A Review of 1958 Federal Income Tax Law Changes." It is planned to distribute another publication pertaining to the handling of expense accounts for income tax purposes in the near future.

The Committee is working on several other publications which it hopes to release in future months. Subjects cover replacement of equipment; development and operation of cash flow charts; retention of records; effect of product mixes on profits; pre-estimating and controlling factory labor costs through adequate records.

A subcommittee under the chairmanship of Herbert Brod of Lutz & Sheinkman, is studying a standard accounting system for platemakers. The Committee is reviewing the necessity of revising the LPNA Budget Cost Manual and the present annual Cost Operating Ratios Study.

•

Feather Moves Offset Plant

The William Feather Co., Cleveland, has announced plans to move its offset division to larger quarters in the company's 60,000 sq. ft. plant, completed in 1955, at 9900 Clinton Road.

The offset plant, now located at 1125 Rockwell Ave., in downtown Cleveland, is under the direction of Richard McAllen, new superintendent succeeding Creighton H. Davies, who resigned recently.

The move is expected to be completed next month.

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...New H.S. 800 FOLDER with speeds up to 800 feet per minute.
...25,000 impressions per hour ON ALL FOLDS

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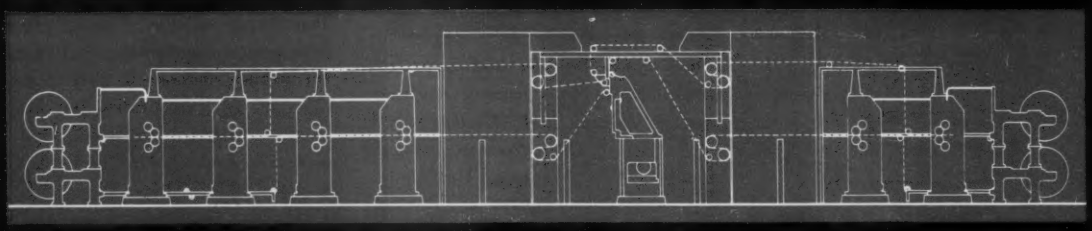

FEATURES of 22¾" x 36" Publication Press.

- Each unit will print single color on each side of web.
- Number of pages and colors is determined by number of perfecting units and webs.
- Folded signatures delivered in following sizes with one web.
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- High speed folder . . . up to 25,000 impressions per hour ON ALL FOLDS. Remote register control operated from the folder, optional.
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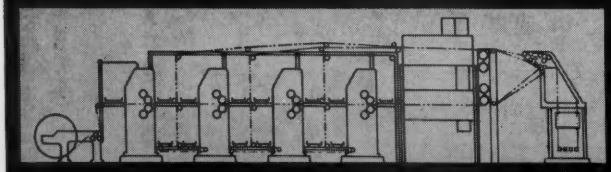
- Latest design folders. Change-over from single to right-angle fold or from single to double parallel fold accomplished in **less than five minutes.**



Typical HANTSCHO 6-unit publication press with high speed folder—Note 4 units left, 2-right, arranged for black and white, 2-color and 4-color printing.

NEW, VERSATILE, FAST and HIGHLY EFFICIENT describes the Revolutionary new HANTSCHO Publication Press with emphasis on quality production—Designed to print publications, books, inserts, reprints, catalogs, supplements.

Full provision for color, "at will" with web fed, high speed hairline register. Built in any number of units from 1 to 8 or more...with the revolutionary Hantscho H.S. 800 folder. Handles all types of stock even including letterpress machine coated. Multiple unit principle of construction provides any number of pages or colors desired. Flying paster can be supplied for continuous operation.

Hantscho offset presses can also be built to customer specifications up to 44½" x 54".

Typical HANTSCHO 4-unit publication press with high-speed dryer, cooler and folder. Arranged for black and white 2-color and 4-color printing.

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PIA Conference Reveals Outlook For Printing Industry Is Bright

MORE than 250 printing production executives from leading printing plants throughout the United States and Canada gathered at the Edgewater Beach Hotel in Chicago last month to discuss new techniques and developments in lithography and letterpress and their application to plants now and in the future.

Kurt E. Volk, president of PIA (left), and Col. H. R. Kibler, immediate past president, at PIA Production conference.

Meeting for Printing Industry of America's Fourth Production Conference, PIA members discussed the future of the two processes in seminar discussions arranged by size of plants and the processes used, and heard an impressive array of speakers summarize new developments and the progress of research.

Highlighting the conference was a forum on the significance of the new developments in letterpress and lithography which also provided opportunity for floor discussion as the speakers outlined the progress of research and engineering in the industry over the past decade.

J. Homer Winkler, Battelle Memorial Institute, Columbus, Ohio, in summarizing the forum, stated that "the program has settled any doubts that ever existed about the vitality and future of letterpress and lithography. . . . The trend is definitely toward preparing copy and art for some type of one-shot photomechanical or photochemical operation. It may not be long before copy and art in mechanical paste-up form are prepared in the same manner for all printing processes. Only the plates would be different."

In a summary of the progress of the Du Pont photopolymer plates, H. A. Gladden, district manager for the company, pointed out that Du Pont expects its experimental plate ultimately to be a significant contribution to the printing industry. He said that the light weight and flexibility of the plate may affect such things as future press design, press speeds, press weights, power supply, etc. He pointed out however, that a decision to produce the plates commercially has not been made, but is expected by completion of the field-testing program.

Michael H. Bruno, research director, Lithographic Technical Foundation, in speaking on "New Developments in Lithography," pointed out the significant developments in that field and the contributions of the Foundation to organize research. He mentioned presensitized, precoated plates, the improvement of color reproduction, the development of balanced inks in facilitating color correction, and explained the greater flexibility in types of qualities of papers which may be used through improved dampening systems. He also gave particular attention to the coming of automation in the lithographic process, with particular reference to scanning and photocomposition.

Other speakers at the forum were James V. Elliott, training director, New York Employing Printers Association who spoke on "Major Developments in the Operation Preliminary to Plate Making"; Marvin C. Rogers, graphic arts management consultant who was chairman of the program; and Gordon R. Rhode, Reynolds & Reynolds Co., Dayton Ohio, who gave the keynote address.

Kurt E. Volk, president of PIA, in a talk at a dinner meeting on Dec. 4, second day of the meeting, discussed the techniques through which management can get the interest and participation of plant employes in programs designed to change attitudes and increase productivity. The technique he outlined was developed by the Master Printers Section of PIA. Col. H. R. Kibler, past president of PIA, was toastmaster for the dinner.

Quality control was the subject of a talk by Evan D. Scheele, vice president and director of central management staff, Rapid American Corp., New York. He pointed out how printers and lithographers could avoid many of the common production delays and improve quality. He outlined specific steps that could be taken to control materials, plates and equipment, and their processing from the viewpoint of corrective actions to be taken.

Increased output was the problem tackled in the session entitled, "What are the Speed Limits in Your Plant." Grant Herman, Kable Printing Co., and chairman of the PIA production standards committee, served as chairman. The session dealt specifically

Panel members at new developments forum are (l.-r.) J. Homer Winkler, Battelle Memorial Institute, Columbus, O.; James V. Elliott, New York Employing Printers Association; Michael H. Bruno, Lithographic Technical Foundation; H. A. Gladden and Hugh B. Gage of du Pont; and Marvin G. Rogers, management consultant who served as moderator.

with these questions: How fast can your equipment run effectively? How can output be measured? What steps can be taken to bring increased productivity and output in line with attainable standards?

Joseph Edwards, president of Edwards Brothers, Inc., gave a general case history illustrating the complete application of standards to a medium-size plant producing a wide variety of work. Frederick P. Hofferth, vice president and production manager, American Book Co., Cincinnati, presented a case history of the application of standards to a wide scope of bindery operations. Elmer J. Grover, production manager, Connecticut Printers, Inc., revealed the procedure followed for several years from the initial idea of installing a basis for evaluating production through the development of procedures in a medium to large-sized plant producing some specialty products.

Another session of interest to lithographers was one which dealt with cost reduction techniques. Chairman was Charles A. Conrard and keynote speaker was Clayton G. Orcutt of the University of Wisconsin who outlined the underlying principles of establishing a cost reduction program.

Following Mr. Orcutt's presentation, three case histories were given. William J. Henretty, personnel director, Jensen Printing Co., described his experiences in instructing more than 150 printing foremen and supervisors in foremen management program techniques which led to improved job methods. Phillip E. Bergsieker, vice president and production manager, Cavanaugh Printing Co., illustrated how an informal approach to cost reduction has brought about important accomplishments in lowering cost. He also described a work simplification program.

In the third case history, John C. Ouderkirk, chief estimator, Inland Lithograph Co., illustrated how his company translated production factors into dollar figures, identified the areas which represented the greatest potential for cost improvements, and undertook an effective program of cost reduction.

The PIA committee on production management has scheduled the next conference for June, 1960. Location and exact dates will be announced.

•

Prints Nicaraguan Stamps

Eureka Specialty Printing Co., Scranton, Pa., recently completed the production of air mail and postage stamps for Nicaragua, following which three representatives of the country witnessed the burning of the printing materials.

The lithographed job required the application of as many as eight different colors on some sheets.

During the production period, extreme security measures were imposed to control the materials.

•

Receives Gugler Collection

The Gugler Lithographic Co., Milwaukee, has presented a 52-volume collection of lithographic items dating back to 1890, to the Milwaukee Public Library.

The collection includes letterheads, calenders, posters, post cards and other items.

Complete moisture control, full freedom from lint, with this remarkable new cover... UNI-DAMP® by Jomac

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Krueger Shows New Plant

THE W. A. Krueger Co. held an open house to show off its new plant in Brookfield, a suburb of Milwaukee, early last month. The new plant, completed last summer, now is operating on a 24-hour-a-day schedule with 300 employes.

Covering about five acres on a 15-acre site, the air-conditioned structure contains 140,000 sq. ft. of working space on two levels.

The 30,000 sq. ft. lower level is devoted to paper storage, rail and truck loading docks, baling room, maintenance and supply storage.

The upper level contains the art department, platemaking facilities, camera department, press room, and bindery. The press room contains 10 presses, including a five-color sheet fed offset press, two four-color units and a new web offset press.

Business and executive offices are in a two-story wing set halfway between the upper and lower plant levels.

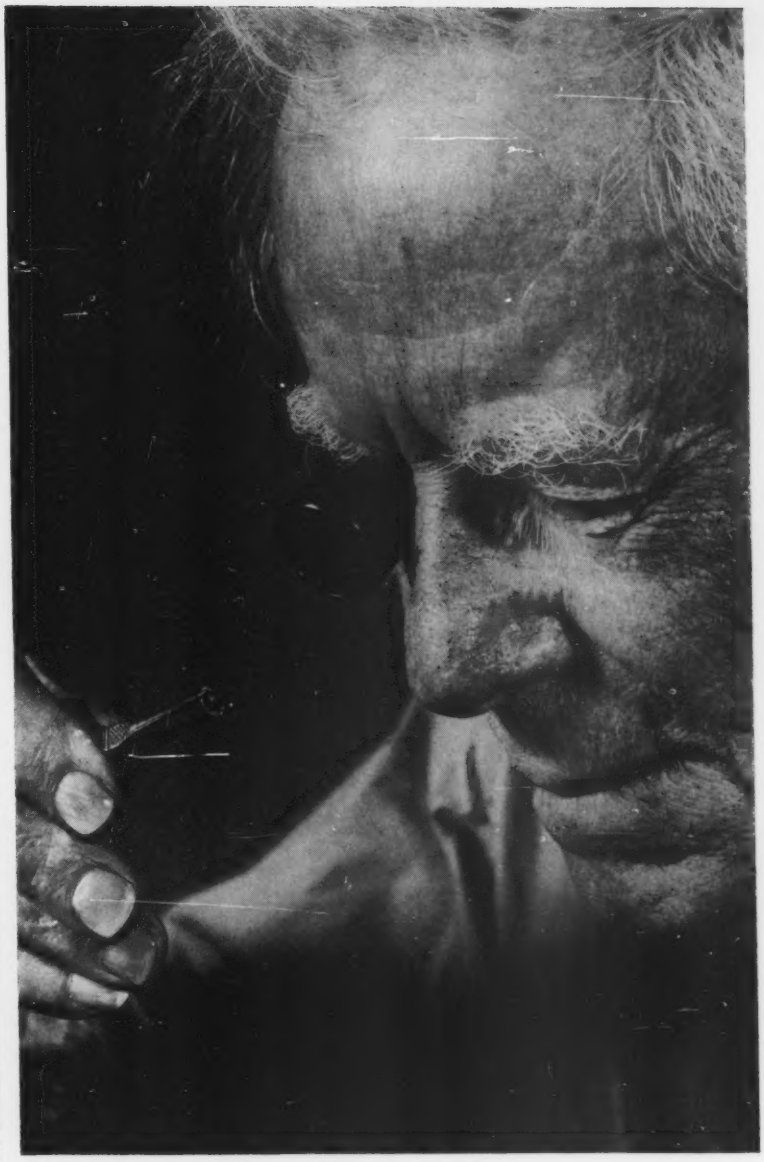
The open house also featured a demonstration of the company's patented lithographic process called "Mico-Color." The process is described as "precision color lithography, consisting of the reproduction of four-color process work by a lithographing process which is supplemented by the use of humidity control, bimetallic plates and a color transparency illuminator which evaluates the range of color values in color copy."

The plant is the third in the company's 25-year history. The company was founded by William A. Krueger in 1934 and started operation with three employes in rented quarters. Mr. Krueger now is chairman of the board. Robert A. Klaus is president.

•

Keller Expands

D. F. Keller Co., Chicago litho firm, has leased 27,500 sq. ft. of space in a building near the plant at 3005 Franklin Boulevard which will be used warehousing paper stock and as the location of a letter service operated by a member of the Keller company. Formerly this letter service occupied space in the Keller building.



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Crescent Litho Inks are a welcome sight for any plant superintendent. With them you *know* the job will turn out right! These inks dry faster, set and resist emulsification better, and are much less likely to offset than ordinary inks. Truly dependable printing *is* just over the horizon for you, even if your runs are small or if your plant is remotely located. Use the complete Spectrum Ink System with its wide variety of perfectly-matching colors (we'll give you the formulae), or buy Inks individually. Write for free color sample book.

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Education Council Presents Awards In New York

MEMBERS of the Education Council of the Graphic Arts Industry held a general membership meeting at the Roosevelt Hotel in New York early last month which was climaxed by the First Annual Awards Banquet of the organization. Sessions were held at the hotel and at the New York School of Printing.

One of the high-lights of the two-day meeting was a tour of the new multi-million dollar printing school which can accommodate 2,000 students.

Among the speakers at the meeting were Leslie C. Shomo, National Publishing Co., Washington, D. C., president of the Council; Dr. Joseph R. Strobel, New York director of vocational education; Ferdy J. Tagle, principal of the New York School of Printing; Donald H. Taylor, president of the New York Employing Printers Association; and John W. Seybold, director of industrial relations, Printing Industries of Philadelphia, who spoke on the subject "Educational Background of Executives in the Printing Industry."

At the awards banquet, an impressive array of awards were presented to deserving individuals and organizations who have contributed to the advancement of education in the graphic arts. All were praised for their efforts in meeting the training and educational needs of the industry and received the appreciation of the officers on the executive committee of the Council.

The first group to receive honors were the charter members of the board of trustees of the National Scholarship Trust Fund. In presenting certificates of recognition to this group, Frederick J. Hartman, educational director emeritus of the International Graphic Arts Education Association cited the charter members for their pioneering work in the all-important field of education in the graphic arts. He also pointed out the significance of the establishment of the National Scholarship Trust Fund which provides interested young people the chance for a college education.

Members of the board who received the certificates were Robert T. Aitchison, Harrison Chandler, Ralph D. Cole, Alex Dittler, George S. Dively, William H. Egan, Francis N. Ehrenberg, Harry M. Fritz, Augustus E. Giegengack, Arthur L. Johnson, Jr., Harry A. Porter, Harold D. Ross, James X. Ryan, Joseph Schwartz, Leslie C. Shomo, Oliver R. Sperry, John D. Taylor, Elmer G. Voigt, William H. Walling, and John M. Wolff. Certificates were awarded posthumously to Robert A. Caffee, Ware E. Griswold and James J. Rudisill.

Certificates of award were also presented to charter scholarship founders and contributors. Harold D. Ross, Kable Printing Co., and chairman of the board of trustees of the Trust Fund made the presentations to:

Marie Harris Barkley, Blanchard Press, Inc., Crown Zellerback Corp., Graphic Arts Monthly, Harris-Intertype Corp., William G. Johnston Co., Judd and Detweiler, Inc., Kable Printing Co., Lucius Wasserman, John M. Wolff, Kurt E. Volk, R. R. Donnelley & Sons Co., H. Russell Gutman, The Miehle Co., Edward I. Miller, Mrs. R. Verne Mitchell, Rudisill and Co., Inc., The Sorg Printing Co., Inc., Southwest School of Printing Foundation Fund, Vandercook and Sons, Inc., Elmer G. Voigt, Elmer G. Voigt Craftsmen Educational Trust, Mrs. Anthony F. Maday, Rumford Printing Co. and William H. Walling.

Mrs. Mary Rudisill **presenting the James J. Rudisill Award for Industry-Education to Robert L. Sorg (right), representing the New York Employing Printers Association. In the center is Emil Mueller, chairman of the Council's education programs committee.**

The James J. Rudisill Industry-Education Cooperation Awards were presented to the New York Employing Printers Association, Apprenticeship Commission of the Printing Trades of Montreal, and the Dayton, Ohio Printing Industry Association. The awards were presented by Emil Mueller of Edward Stern & Co., chairman of the Council's educational programs committee, assisted by Mrs. Mary Rudisill, widow of James Rudisill in whose honor the awards were established.

Certificates of commendation for

Charter scholarship founders **who were present at Education Council banquet and received award certificates are (standing l.-r.) Charles C. Harris, A. Stull Memorial Scholarship; Gustav Zeese, Vandercook & Sons, Inc.; Theodore Broadston, Harris-Intertype Corp.; James Coultrap, The Miehle Co.; Richard Jackman, Rumford Printing Co.; Lucius Wasserman, The Samuel Wasserman Memorial Scholarship; Joseph Schwartz, Wescott-Thomson Co.; and Harold D. Ross, Heathcote Mann Memorial Scholarship. (seated) John Davis, Jr., Judd & Detweiler, Inc.; William Rudisill, James J. Rudisill Co.; Myron F. Lewis, *Graphic Arts Monthly;* Francis N. Ehrenberg, Blanchard Press, Inc.; Robert L. Sorg, The Sorg Printing Co., Inc.; Edward I. Miller, Manhattan School of Printing; and Kurt E. Volk, Jr., Kurt E. Volk Co.**

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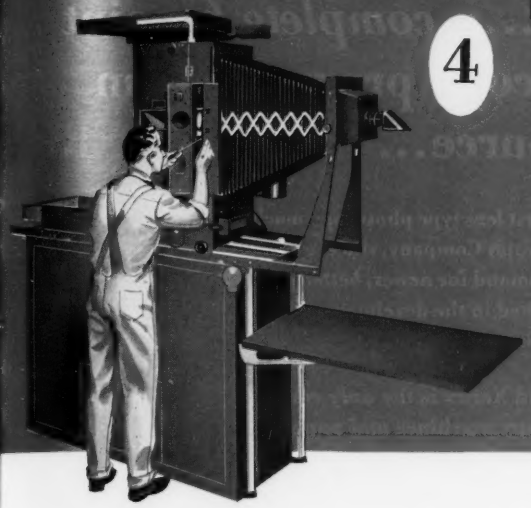

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Haloid service on *any* enlarging or reducing photocopy machine is absolutely *free!* We have the largest, most efficient force of factory trained servicemen in the industry. Service is prompt, courteous, competent. The men are thoroughly versed in *all* photocopy machines and methods. There is *no* obligation for labor or travel; parts, if any, are extra.

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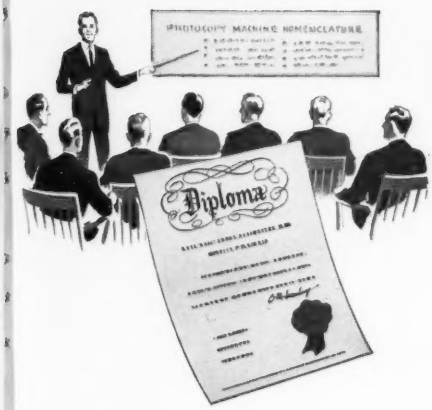

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service to graphic arts education were presented by Mr. Shomo to Mr. Hartman, The New York School of Printing and Graphic Arts Monthly.

Ralph D. Cole, Consolidated Lithographing Co., vice president of the Council, presented the final series of awards. These were to members of the recently established sustaining member group who contribute $500 a year to the council. Companies receiving this honor were:

Byron S. Adams, Washington, D. C., A. Carlisle and Co., San Francisco, Consolidated Lithographing Co., Long Island, R. R. Donnelley and Sons Co., Chicago, Kable Printing Co., Mt. Morris, Ill., W. A. Krueger Co., Brookfield, Wis., National Publishing Co., Washington, D. C., Rossotti Lithograph Corp., North Bergen, N. J., Rocky Mountain Bank Note Co., Denver, Colo., Rudisill and Co., Lancaster, Pa., The Sorg Printing Co., Inc., New York, Curt Teich and Co., Inc., Chicago, Kurt H. Volk, Inc., Bridgeport, Conn., Westcott and Thomson Co., Philadelphia, Pa., Western Printing and Lithographing Co., Hannibal, Mo., Western Printing and Lithographing Co., Poughkeepsie, N. Y. (2), Western Printing and Lithographing Co., Racine, Wis. (2), Western Printing and Lithographing Co., St. Louis, Mo. and World Publishing Co., Cleveland, O.

Gilman To Expand

A. S. Gilman, Inc., and the Gilmanton Salesbook Co., Cleveland, have broken ground for a million dollar move which will include expansion of the Gilman offset department.

The 66-year-old Gilman firm, headed by Frederick C. Merrick, entered the offset field in early 1957. Offset sales now represent 30 percent of total sales.

Included in the expansion of the offset division is the purchase of a 42 x 58″ two-color offset press.

The two companies will move their entire operations, now covering six floors and 37,000 sq. ft, at 623 St. Clair Ave., into 46,500 sq. ft. on one floor. The two new plants are being built on a nine-acre plot in the Grant Ave.-Willow Freeway area south of downtown Cleveland.

Gilman, which produces direct mail material, annual reports, catalogs, house organs and yearbooks, reports it has just completed the best sales year in its history. Sales are reported to have increased 10 percent.

Other officers of the Gilman firm are R. G. Merrick, vice president and general manager; F. A. Merrick, treasurer; T. G. Roberts, vice president; and F. W. Kiessling, secretary. Frederick Merrick is also president of Gilmanton. P. V. Houriet is vice president and general manager of Gilmanton.

A press sheet showing some of the 100,000 Rose Bowl tickets lithographed by the H. S. Crocker Co., Inc., San Francisco. Holding the sheet is Miss San Francisco Mission, Eleanor SoRelle.

Book Club Uses Offset

Lithography has broken through the conservative doors of the Book Club of California, an organization which has devoted itself to fine printing since its inception in San Francisco in 1912. Its first 97 books, produced by letterpress, were followed last autumn by a volume entitled *Noticias de California* reproduced by lithography.

Charles R. Wood and Associates of San Francisco, which had previously done some of the offset illustrations for the Club's letterpress books, produced the organization's first fully lithographed book. It is an account of the Portola expedition to California in 1770, and contains facsimile reproductions of the original Spanish reports as well as the English translations.

R-C-S Elects New Officers

Rolph-Clark-Stone Ltd., Toronto, has announced three executive changes. James O'Reilly has been elected vice president in charge of marketing; Gordon G. Rolph has been elected vice president for manufacturing; and Gavin C. Clark has been appointed secretary-treasurer, succeeding George H. Houston who died in November. All three are directors of the company.

Iranian Completes Course

The superintendent of Iran's government printing office for fine arts printing, Daryoush Vessal, recently completed the advanced offset press work course at the Manhattan School of Printing.

Mr. Vessal, who was sponsored by the United States Government, graduated with honors.

◂ *Bud H. Lyle, supervisor of coating, St. Francisville, Louisiana.*

SMOOTH OPERATOR

Bud H. Lyle is a printer at heart, or he wouldn't be so elated over his job. Bud is a Crown Zellerbach coating specialist, in charge of double-coating operations at the new paper mill in St. Francisville, La., where printing paper history is now in the making.

At St. Francisville, on the longest, widest and fastest paper machine of its kind in the country, Bud will supervise the coating of a revolutionary new paper to be both *roll coated* and *trailing-blade coated* on the machine in one continuous operation.

Bud knows as much about the importance of a smooth impression as anyone in the Printing Industry. That's why he's properly proud of his part in this Crown Zellerbach paper-making breakthrough. He knows it will bring Printers premium quality printing papers, with an extraordinarily level/smooth surface at non-premium prices. To be available early in 1959.

CROWN ZELLERBACH PRINTING PAPERS

CZ

36 South Wabash Avenue • Chicago 3, Illinois

James Fuller, Eastman Kodak Co., and William McCoubrey, Lord Baltimore Press, discussing a class problem during recent week-long quality control seminar at Rochester Institute of Technology.

RIT Seminar Attracts 23

The annual Statistical Quality Control Seminar for the Graphic Arts Industry, held recently at the Rochester Institute of Technology, attracted 23 students representing 22 companies. The week-long program was under the general supervision of Donald Macaulay, president of Paper and Printing Quality Control, Inc., originator of the seminar. Working with Mr. Macaulay in coordinating the overall seminar curriculum was Warren L. Rhodes, director of RIT's graphic arts research department.

Among the specific subjects covered were applications of statistical quality control in the printing industry, inspection by attribute sampling, control charts, attributes and variables, statistical quality control theory, quality audits, setting up time and cost budgets, statistical quality control at work in lithography, and paper making and converting in addition to a panel discussion on color control.

The color control panel consisted of John Warren, consultant; F. L. Wurzburg, Jr., head of International Printing Ink's new color center; Robert Meeker, sales manager, Macbeth Daylighting Corp.; F. E. Church, production manager, Time, Inc.; Mr. Macaulay; and Mr. Rhodes.

Among the speakers at the seminar were DuWayne Carlson, Champion Paper & Fibre Co.; Edward Stevenson, Sutherland Paper Co.; Dr. Carl Noble, Kimberly-Clark Corp.; and William Cranston, Western Printing & Lithographing Co.

Attempt to Curb State Printing

An attempt by Wisconsin printers to reduce the amount of printing done by state employes received a serious setback at a recent meeting of the state's committee on government operations.

Printers and lithographers have been trying for months to get the committee to adopt a new definition of printing which, they hope, will have the effect of outlawing much of the printing work the state does for itself.

After a spirited discussion, the committee voted to refer the proposal back to its subcommittee on printing which earlier had split three to two against it. This, the printers believe, has the effect of killing the proposal as far as the current committee is concerned. An individual legislator, however, still could introduce it in the 1959 legislature.

A printing industry spokesman contended that by mimeographing, lithographing and duplicating much of its own work, the state is violating a constitutional ban on state printing. The printers seem willing however, to allow the state to retain some of these functions if the more advanced printing techniques are turned over to private printers.

A spokesman for the state replied that the printers' proposal would "hamstring" state duplicating activities, which he contended are far cheaper than private printers for simple jobs.

State Senator Robert Knowles advised Stephen Gavin, attorney for the Democrat Printing Co., Madison, that a remedy could come from a court suit, rather than from a new state definition of printing. Mr. Gavin has led the fight to curb state printing.

State Assemblyman Glen Pommerening told Mr. Gavin that the state's printing activities, if unconstitutional, could not be made constitutional simply by the enactment of a new definition of printing. He too urged a court test of the constitutional clause.

•

Produces Unusual Insert

A four-color insert, incorporating examples of halftone printing, vignettes, color on color and heavy solids with small type reverses in its design, was used in graphic arts, advertising and printing magazines by the New York & Pennsylvania Co., last month.

Appearing as page 101 and 102 in the December issue of *Modern Lithography*, the insert was designed by George Olden, graphic arts director for CBS-TV.

The company plans a series of such inserts, to be created by top designers, which will subject the new offset paper to the toughest problems of reproduction.

•

Davies Joins Short Run

Creighton H. Davies has resigned from the William Feather Co., Cleveland, to assume the position of vice president and general manager of the Short Run Color Corp., also of Cleveland. Mr. Davies had managed the D. E. Robinson Co. since 1947 until its acquisition by Feather in 1957. He then continued to head the Robinson phase of the Feather operation until his resignation.

The Short Run firm, which specializes in three-color work, is currently in the midst of an expansion which has included the purchase of a new Harris press.

•

Renfrow Moves

Renfrow & Co., Corpus Christi, Texas, combination shop, has moved into new quarters at 1123 Agnes St., which triples the former floor space. The new building is air-conditioned and has humidity control.

Top Management To Meet At PIA Session

PIA's Fifth Annual Presidents' conference for top management will be devoted to considerations of what the industry must do to prepare itself for the coming decade. The conference, which will be held at Boca Raton, Fla., Feb. 2-6, will be under the general direction of Frank F. Pfeiffer, chairman of PIA's top management committee.

The first subject of the five-day conference will be "How Do I Develop my Successor?" PIA believes that the selection and development of a successor who can satisfactorily carry on in the absence of top management will be important for many printing companies in the 1960's.

"What Top Management Needs to Know" is the topic of a presentation which will include an explanation of what is considered to be the ideal in simplified management reporting for the control of a printing business.

The new system of management control which PIA has developed after many years of study will be officially presented at this meeting and those in attendence will have a chance to question the authors regarding its application to their businesses. The program will also include small group seminar discussions in which companies of like classification may discuss their respective problems of management control.

On Tuesday, PIA will hold its first national meeting with representatives of various suppliers to explore the potential benefits which can result from a closer working relationship and more direct channels of communications between the buyer and supplier of equipment and materials.

The third day of the conference will be concerned primarily with the extent to which top management spend their time in selling. The two principal points of discussion will be "Should You Hire Salesmen To Do Your Selling?" and "How Do You Find the Right Salesman and How Do You Train Him?"

In another discussion period, top management will consider the broad subject of marketing printing products in the 1960's and discuss the extent to which management talents should be diverted from managing the business to obtaining sales. Case histories will point out individual planning experience in locating and training competent salesmen to take over this aspect of top management.

The fourth day will deal with the subjects "How To Get New Money," "How To Manage Taxes To Increase Profits" and "Acquisitions and Mergers."

The final day of the conference will cover the subject of creating an atmosphere in which people will want to work. This will include the discussion of motivation and personnel utilization which statistics have shown represents the direct difference between satisfactory and unsatisfactory profits.

Registrations for the conference and reservations for the hotel may be obtained from PIA, 5728 Connecticut Ave., N. W., Washington, D. C.

Forms Map Firm

Contemporary Maps, Inc., has been organized in Chicago for production of specialized city maps bearing market data of interest to researchers.

Mary W. Creely, president, explained that official city maps will be imprinted in various coded colors, with explanatory legends, to indicate socio-economic income levels, ethnic characteristics, and land use information for each square mile of a given city. First to be issued was a map of Chicago. Other cities will follow.

Max Gregg, head of the Gregg-Moore Lithographing Co., Chicago, is a partner in the enterprise, and all production will be done by lithography in that firm's 10-year old plant at 111 No. Wacker Drive.

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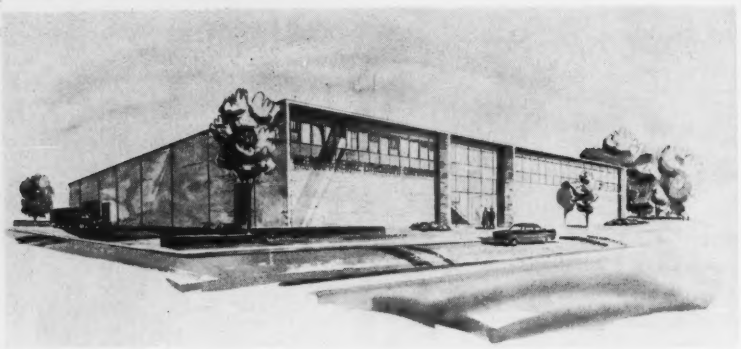
New Building For ALA

The Amalagamated Lithographers of America is moving its international headquarters into a newly purchased building at 223 West 49th St., in New York, early this year.

The nine-story, air-conditioned building allows ample room for expansion of the union's offices, facilities and staff.

Robert E. Rossell (left), managing director of the Research and Engineering Council of the Graphic Arts Industry, and Paul Lyle (center), executive vice president, Western Printing & Lithographing Co., and treasurer of the Council, discuss a set of progressive proofs with Jack Groet, manager of Eastman Kodak's graphic reproduction technical service center in Rochester, N. Y. Twenty-two members of the executive committee of the Council visited Kodak recently to review developments in graphic technology.

New Plant For Williams & Heintz



Williams & Heintz Lithograph Corp. has completed a move into a new $500,000 plant at 8351 Central Ave., near Capital Heights, Md. The 39-year-old firm had previously been located at 220 Eye St., N.E., Washington, D. C., since 1930.

The 27,000 sq. ft. building has three levels and has air-conditioning and humidity control. The pressroom and other technical and mechanical departments are located below a glassed-in control room overlooking the complete operation.

Officers of the company, which employs 70 persons, are William W. Heintz, son of one of the founders, president; David D. Godfrey, vice president; George T. Raborg, treasurer; and Benjamin Neitzey, secretary. Mr. Heintz became president in 1951 when his father retired.

The firm reports that its business has increased from an annual gross of $100,000 in 1930 to more than $1 million. It specializes in magazines, brochures, pamphlets and books.

Forbes Advances Three

Forbes Lithograph Mfg. Co., Boston, Mass., has announced the appointment of Vincent C. Lanigan to the position of packaging sales manager.

Mr. Lanigan has been with Forbes since 1954 and was formerly gravure sales manager. He will now be responsible for packaging sales in gravure, lithography and letterpress.

The company has also announced the appointment of John A. Bogart, Jr., as creative sales and advertising manager, and John L. Farrell as research and sales promotion manager.

•

More Letterhead Winners

Whiting-Plover Paper Co., Stevens Point, Wis., has announced the November winners in its 1958 Plover Bond letterhead competition. Ten printers are selected each month.

Winners are Perry Acker, American Printing & Lithographing Co., Seattle, Wash.; Jack Kaus of Hogan-Kaus, San Francisco; Raymond Kuhl, Kutterer-Jansen Printing Co., St. Louis; Robert Green, Lithograph Reproductions, Oakland, Cal.; Raymond Green, Jr., of Green's Inc., Long Beach, Cal.; Robert Trogman, Creative Printing Co., Los Angeles; Robert Baker, Paragon Press, Inc., Salt Lake City; Curt O'Connor, Japs-Olson Co., Minneapolis; Otto Hammerich, Florida Graphic Arts, Inc., Sarasota; and Howard A. Doyle of Howard A. Doyle Printing Co., Cambridge, Mass.

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200 Attend Litho Forum

More than 200 persons attended a Litho Shop Practice Forum in St. Louis November 21 and 22, sponsored by the Graphic Arts Association of St. Louis and the David Ranken Jr. School of Mechanical Trades.

Color films, synchronized with talks and demonstrations by Michael Bruno and Frank Preucil of the Lithographic Technical Foundation, covered a number of subjects including surface platemaking; deep-etch, presensitized and bimetal platemaking; producing halftones; color reproduction; paper troubles on the press; ink problems; and instruments for control and standardization.

Forms New Litho Firm

Kurt Klein has announced the formation of the Kiesling-Klein Printing Co., Inc., Buffalo, of which he is president. Mr. Klein, who has operated the Whitney Printing Co., for the past 11 years, purchased the Kiesling facilities at 64 Division St., from George Kiesling who will continue to manage it.

The firm plans to specialize in four-color process lithography.

•

Dively Predicts Good Year

In an annual outlook on business conditions for the coming year, George S. Dively, chairman and president, Harris-Intertype Corp., predicted continued improvement throughout the year, with the stimulus during the first half of the year coming largely from the consumer. During the latter part of the year, the capital equipment recovery should provide additional impetus, he commented.

The outlook for Harris-Intertype appears good, he said, with increased interest being shown in high-speed magazine presses, four, five and six-color sheet-fed presses and other new and improved products.

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New Audio-Visuals From LTF

The Lithographic Technical Foundation now has available two new audio-visuals to aid cameramen in learning the advantages and limitations of halftone screens.

Entitled Contact Screens (AV#18) and The Glass Crossline Screen (AV#19), the film strips and accompanying records show and explain the proper techniques for handling all types of screens. They demonstrate the exposure, development, and screen selection techniques that result in the best reproduction of continuous-tone copy by lithography.

Further information is available from the Foundation, 131 East 39th St., New York 16; or 1800 S. Prairie Ave., Chicago 16.

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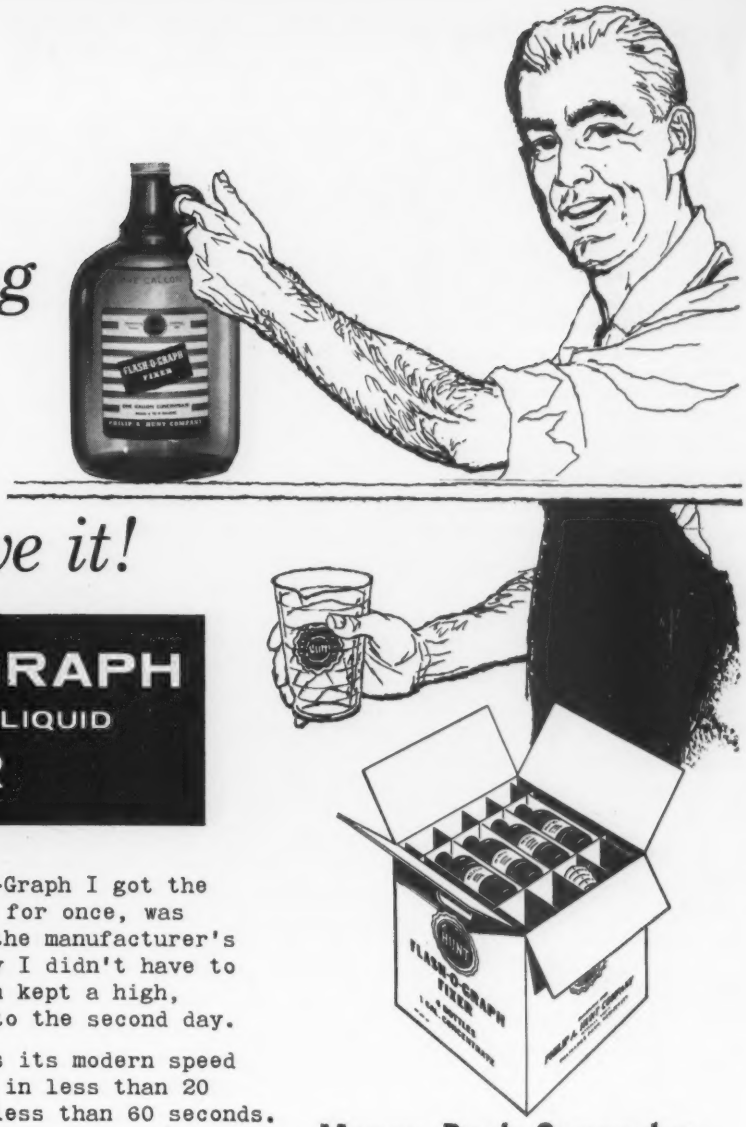
To Represent Miller

Walter J. Guise has been appointed New York representative for the Miller Printing Machinery Co. He will be located at the Company's branch office, 75 Varick Street.

This Fixer lasted so long in my tray I could hardly believe it!



FLASH-O-GRAPH
CONCENTRATED LIQUID
FIXER

"First time I tried Flash-O-Graph I got the surprise of my life. Here, for once, was a product that lived up to the manufacturer's claims. After the first day I didn't have to dump my tray...Flash-O-Graph kept a high, uniform fixing rate well into the second day.

"Another thing I noticed was its modern speed -- cleared mechanical films in less than 20 seconds, commercial pan in less than 60 seconds.

"And when I took a tally on my output for the day I found that I was fixing more film by sheet or square inch than with any other fixer I'd ever used.

"Now my life's a lot easier too. No drums to lift, no heavy carboys to lug around. Just hook my finger into the Hunt jug and pour, add water, add hardener as needed and I'm all set for a couple of days.

"Take my advice, order a carton today. You're not taking any risk because Flash-O-Graph is sold with a money-back guarantee that sticks."

Money-Back Guarantee

Order a carton of Flash-O-Graph from your nearest Hunt Branch. If it doesn't do all we say it does, write to the same branch for return instructions, and we will refund the full purchase price and shipping cost.

Each carton of Flash-O-Graph contains four 1-gallon bottles of Fixer, four 12 oz. containers of Flash-O-Graph Hardener and one glass measuring graduate.

PHILIP A. HUNT COMPANY
PALISADES PARK, NEW JERSEY
BRANCHES IN PRINCIPAL CITIES
In Canada: Philip A. Hunt Company (Canada) Ltd., 77 Leslie Street, Toronto

QUALITY CONTROLLED HUNT CHEMICALS

(l.-r.) Alfred Lake, winner of Roberts & Porter's national sales contest for the second year in a row, receiving his award from Theodore Randall, Boston branch manager. John Skahill, general sales manager, made the presentation to second and third place winners Keith Nickoley and Charles Baxa of the Chicago office. The announcement was made on Dec. 29.

LPNA-LMNA Await Merger

Members of two graphic arts associations were awaiting word from the secretary of state of New York at presstime for approval of a proposed merger.

The membership of the two associations, The Lithographers & Printers National Association and the Label Manufacturers National Association, already have approved the plans for the merger. LPNA members voted Dec. 19, LMNA members, Oct. 27.

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Clawson Receives Award

William T. Clawson, advertising and promotion director, Harris-Intertype Corp., has been named *Industrial Marketing's* man of the year for 1958. Selection has been made annually by the magazine since 1938.

Mr. Clawson was cited for the "high standards of quality and originality" which have been maintained in Harris-Intertype advertising under his direction. The award was to be announced in the January issue of the magazine.

•

Denecke Honored For Service

Fred A. Denecke, Detroit sales manager for U. S. Printing & Lithograph Co., was presented with a diamond studded pin in recognition of 50 years of service, at the company's annual awards dinner on Dec. 11.

Forty-five employes received awards, presented by A. H. Wilhelm, vice president and controller. Each of the 90 persons attending the dinner have been with the company for more than 25 years.

Three Changes At Calvert

The Calvert Lithographing Co. has announced the appointment of John Best, formerly with the Manz Corp., and Newman-Rudolph Lithographing Co., Chicago, as plant superintendent.

Other recent appointments are Andrew Berger to pressroom superintendent; and Frederick Schepke to bindery superintendent.

Purchases Mohawk Litho

Kenworthy Printing Co., Inc., and Kenworthy Educational Service, Inc., Buffalo, have purchased the facilities of Mohawk Litho, located at 25 E. Huron St.

The purchase was made from George Burns for an undisclosed amount.

New officers of Mohawk are Robert C. Kenworthy, president; Clayton A. Kenworthy, treasurer; and Florence Kenworthy, secretary.

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Robertson Expands Plant

Robertson Photo-mechanix, Inc., Chicago, has recently opened a new addition to its plant which increases its floor space by 50 per cent according to the company.

The addition will house, among other things, a complete metal forming department to produce the "Plate-Mate" series of platemaking equipment.

Finishes Costly Garden Book

What is believed to be the largest and costliest horticultural book ever published has recently come off the presses of Sweeney, Krist & Dimm, nationally known horticultural printer and lithographer in Portland, Oregon.

The book, entitled, *Garden Plants in Color*, took three years to prepare and produce and was published at a total cost of approximately $250,000. The book is retailing for $42.50. The first press run consisted of 10,000 copies.

The 8½ x 11" book weighs six pounds and has 236 pages. It contains 438 full-color reproductions on Kromekote 50-pound cover stock, coated on one side. The reverse sides of illustrated pages are blank. The 100 pages of text are printed in 10- and 12-point type.

Henry J. Krist, president of the 46-year-old litho firm was in charge of production. Walter R. Dimm, a partner, was instrumental in the selection of the pictures.

About one-fourth of the photographs in the book came from the firm's library of copper engravings. The rest are from Ektachrome transparencies.

The presswork on the book was completed in three months. Each form was printed in one continuous run, supervised by the same pressman to insure uniformity of color quality throughout the 10,000 copies.

Walter R. Dimm and Henry J. Krist of Sweeney, Krist & Dimm, Portland, Ore., looking at new garden book which took the firm three years to produce.

There's more than one way to punch a hole...

A dinner fork will work, if you haven't the right tool, but it's not designed to do this job. In paper—a tool printers use—there is a specific grade designed to meet the requirements of each job. Choose the right one and both you and your customers will benefit.

For instance, suppose a customer brings you an offset job entailing full color illustration and almost total ink coverage. Naturally he wants the most exact reproduction, yet maintaining a high level of production quality—at the lowest possible cost. Your paper selection, in this case, is Kimberly-Clark's SHOREWOOD . . . an economical, fully-coated grade with exceptional press performance.

Or, suppose you get an order to print a house organ. It's a letterpress job—and it's a natural for Kimberly-Clark's MULTIFECT—a fully-coated, good opacity letterpress sheet designed primarily for volume work. Printers have discovered they get more usable sheets per thousand impressions with Multifect than with any other paper!

Kimberly-Clark's complete line of fine printing papers includes grades suited to whatever job you may have. Whatever your needs, CHOOSE THE RIGHT KIMBERLY-CLARK PAPER FOR THE JOB. It will give you the printability, runability and all-around quality only found in papers produced carefully by experts in some of the world's finest paper mills.

Turn the page for a complete list of Kimberly-Clark paper distributors.

Kimberly-Clark

PRINTING PAPERS

KIMBERLY-CLARK CORPORATION • NEENAH, WISCONSIN

Kimberly-Clark fine papers are distributed by the following quality merchants:

ARKANSAS PAPER CO.
Arkansas: Little Rock

BALDWIN PAPER CO.
New York: New York

BALTIMORE PAPER CO., INC.
Maryland: Baltimore

BARTON, DUER & KOCH PAPER CO.
District of Columbia: Washington

BEACON PAPER CO.
Missouri: St. Louis

BEEKMAN PAPER CO.
New York: New York

BERKSHIRE PAPERS, INC.
Illinois: Chicago

BERMINGHAM & PROSSER CO.
Michigan: Kalamazoo

BONESTELL & CO.
California: San Francisco

BOUER PAPER CO.
Wisconsin: Milwaukee

BULKLEY DUNTON & CO.
(Div. of Carter Rice Storrs & Bement, Inc.)
New Jersey: Newark
New York: New York

CANFIELD PAPER CO.
New York: New York

CARPENTER PAPER CO.
California: Los Angeles, San Francisco
Colorado: Denver, Pueblo
Illinois: Chicago
Iowa: Des Moines, Sioux City
Kansas: Topeka
Minnesota: Minneapolis
Missouri: Kansas City
Montana: Billings, Great Falls, Missoula
Nebraska: Lincoln, Omaha
New Mexico: Albuquerque
Oklahoma: Oklahoma City
Texas: Amarillo, Austin, Dallas, El Paso, Fort Worth, Harlingen, Houston, Lubbock, San Antonio
Utah: Salt Lake City
Washington: Seattle

CARTER RICE STORRS & BEMENT
Connecticut: East Hartford, New Haven
Maine: Augusta
Massachusetts: Boston, Springfield, Worcester
Rhode Island: Providence

CARTER, RICE & CO. OF OREGON
Oregon: Portland

CAUTHORNE PAPER CO.
Virginia: Richmond

CENTRAL OHIO PAPER CO.
Indiana: Indianapolis

CHATFIELD PAPER CORP.
Kentucky: Louisville
Ohio: Cincinnati

CHATFIELD & WOODS CO. OF PA.
Pennsylvania: Pittsburgh

CHICAGO PAPER CO.
Illinois: Chicago

CRESCENT PAPER CO.
Indiana: Indianapolis

D AND W PAPER CO.
Louisiana: New Orleans

DILLARD PAPER CO.
North Carolina: Charlotte, Greensboro, Raleigh, Wilmington
South Carolina: Greenville
Tennessee: Nashville
Virginia: Roanoke

DUDLEY PAPER CO.
Michigan: Lansing, Saginaw

ELM PAPER CO.
Pennsylvania: Scranton

JOHN FLOYD PAPER CO.
District of Columbia: Washington
Maryland: Baltimore

FOREST PAPER CO.
New Jersey: Newark
New York: New York

FRASER PAPER CO.
Oregon: Portland

GENERAL PAPER CORP.
Pennsylvania: Philadelphia

GENESEE VALLEY PAPER CO.
New York: Rochester, Syracuse

HUBBS & HOWE CO.
New York: Buffalo

HUDSON VALLEY PAPER COMPANY
New York: Albany

INDEPENDENT PAPER CO.
Washington: Spokane

INGRAM PAPER CO.
California: Los Angeles

JACKSON PAPER CO.
Mississippi: Jackson

JOHNSTON PAPER CO.
Ohio: Cincinnati

KNIGHT BROTHERS PAPER CO.
Florida: Jacksonville, Miami, Orlando, Tallahassee, Tampa

LINDE-LATHROP PAPER CO., INC.
New Jersey: Newark
New York: New York

LOUISIANA PAPER CO., LTD.
Louisiana: Baton Rouge, Shreveport

MIDLAND PAPER CO.
Illinois: Chicago

MILLCRAFT PAPER CO.
Ohio: Akron, Cleveland

MINNESOTA PAPER & CORDAGE CO.
Minnesota: Minneapolis

NEWELL PAPER CO.
Mississippi: Meridian

OHIO & MICHIGAN PAPER CO.
Ohio: Toledo

PALMETTO PAPER CO.
South Carolina: Columbia

PAPER MERCHANTS, INC.
Pennsylvania: Philadelphia

PETREQUIN PAPER CO.
Ohio: Cleveland

QUIMBY-WALSTROM PAPER CO.
Michigan: Grand Rapids

ROURKE-ENO PAPER CO., INC.
Connecticut: Hartford, New Haven
Massachusetts: Springfield

ROYAL PAPER CORP.
New York: New York

SCIOTO PAPER CO.
Ohio: Columbus

SEAMAN-PATRICK PAPER CO.
Michigan: Detroit

SENSENBRENNER PAPER CO.
Wisconsin: Milwaukee

SHAUGHNESSY-KNIEP-HAWE PAPER CO.
Missouri: St. Louis

SLOAN PAPER CO.
Alabama: Birmingham
Georgia: Atlanta
Tennessee: Chattanooga

SOUTHERN PAPER CO.
Tennessee: Chattanooga, Knoxville

TAYLOE PAPER CO.
Oklahoma: Tulsa
Tennessee: Memphis

TOBEY FINE PAPERS, INC.
Missouri: St. Louis

TROY PAPER CORPORATION
New York: Troy

UNIVERSAL PAPER CO.
Wisconsin: Appleton

D. L. WARD CO.
Pennsylvania: Philadelphia

WESTERN NEWSPAPER UNION
Kansas: Wichita
Oklahoma: Tulsa

WHITING-PATTERSON CO.
Delaware: Wilmington
Pennsylvania: Philadelphia

WYANT & SONS PAPER CO., INC.
Georgia: Atlanta

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HONOLULU PAPER CO.
Honolulu, Hawaii

• • •

KRUGER PAPER CO. LTD.
Montreal, Que.

SMITH, DAVIDSON & LECKY, LTD.
Vancouver, B. C.

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Kimberly-Clark Corporation
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Please send me your colorful portfolio which contains specific printed samples and complete information on Kimberly-Clark's Shorewood Coated Offset and Multifect Coated Book.

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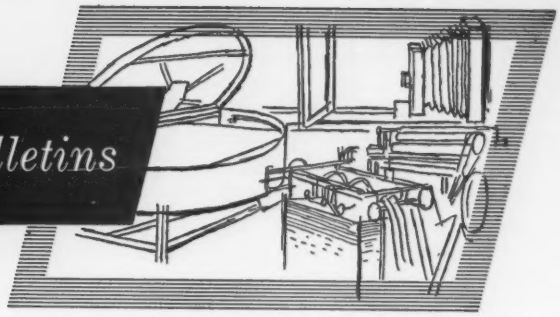

ATF To Distribute 3M System

American Type Founders Co. has been appointed distributor for the 3M brand dampening rollers and sleeves manufactured by the Minnesota Mining & Manufacturing Co.

"The 3M Dampening System will be available as an optional item on all Chief 15, 20, 22, 24, 29 and Super Chief presses," John T. Porter, ATF sales manager, said in announcing the details of the program. "Through ATF and its 11 branches the dampening system will also be available for installation on both ATF and other makes of offset presses now in operation." He also pointed out that all ATF sales and service staffs have been fully trained in the installation, maintenance and operation of the system.

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Du Pont Offers Folder

A six-page folder containing technical data on Cronar Ortho A litho film and its applications is being offered by Du Pont. Booklet includes graphs that show the relative effect of temperature and humidity on four types of emulsion supports. Processing data is also included.

Copies can be obtained from Du Pont Photo Products, N-2430-A, Wilmington, Del.

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Two New Rolcor Products

Roll-O-Graphic, Corp., 133 Prince St., New York 12, has announced the development of two new products for lithographers: an improved red lithographers tape and a two-sided cleaner sheet.

The new lithographers tape, called Rolcor Transtape, is said to be opaque when plates are burned in yet is as easy to see through as clear tape. Easy to cut, the tape is designed to be reapplied without tearing the goldenrod surface. It is available in standard widths.

The Rolcor two-sided cleaner sheets are manufactured from an extremely absorbent, high wet-strength blotting paper and made to fit all duplicator presses to 10 x 16". The sheets are available in pinbar, oval or straight cut.

Further information is available from the company.

•

Offers Paper Cutter

A low cost power paper cutter in small press sizes up to 17 x 22" now is being offered by the Michael Lith Sales Corp., 143 West 45th St., New York 36.

Called the Michael-Miracle, the cutter has a feature that allows the motor to run only when the actual cut is made, thereby accomplishing savings in electricity costs.

Nekoosa-Edwards Paper Co. has chosen the attractive model pictured above to introduce its new four-color cartons for Nekoosa Offset papers. The center panel is in red, yellow and green with dark blue overprinting. Cartons are produced by Downing Box Co., Milwaukee.

Ideal Offers New Roller

Ideal Roller & Manufacturing Co., has announced the development of a new lithographic roller called Tantone. Composed of synthetic rubbers, the roller is said to have a life expectancy of seven years.

The roller, developed in the Ideal laboratories, was submitted to lithographers for testing and also received exhaustive testing by the manufacturers.

A booklet on Tantone is available from the company, or any of its distributors.

•

Challenge Offers Small Folder

The Challenge Machiney Co., Grand Haven, Mich., is offering a new, small, fast folder which is said to automatically feed, fold and deliver sheets up to 9 x 14" at up to 7,200 pieces an hour.

Named the Fold-Master, the machine features positive friction feed and single lever action which can set up the machine to feed thicknesses from 12 to 100-pound stock.

Further information is available from the company or any of its authorized dealers.

•

Waldron Issues Catalog

John Waldron Corp., subsidiary of Midland-Ross Corp., has completed the preparation of its new general catalog entitled, "Web Process Engineering."

The 128-page catalog describes the company's complete line of equipment for the graphic arts, as well as the services and equipment offered by its affiliates.

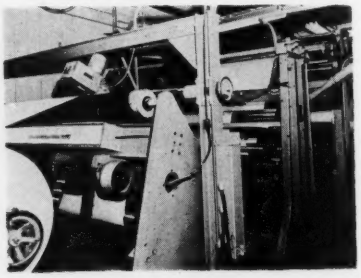
Copies are available from the company, P. O. Box 791, New Brunswick, New Jersey.

Develops Finishing Machine

The Dexter Co., division of Miehle-Goss-Dexter, Inc., in cooperation with S. D. Warren Co. and Champion International Paper Co., has developed a paper finishing machine which, in one continuous operation, inspects the web for lumps or voids, sheets it to size, stacks good sheets smoothly and evenly ready for packaging and shipping, and directs defective sheets into a reject pile.

The machine, under development for four years, is currently being evaluated in daily operation at the S. D. Warren Co.'s Cumberland, Me. mill. It includes an unwind stand with automatic tension control rolls, inspection stations, reel-type cutter, and layboys for first quality paper and rejects. Roll sizes may range from 32 to 82″ in width and to 42″ in diameter. Web may be sheeted in lengths ranging from 36 to 80″.

The unwind stand is a shaftless type and the web unwinds from it through tension control rolls to the inspection stand. This stand has two inspection stations. One inspects for lumps, wrinkles, welts and the like, and the other inspects for holes, tear outs



and other voids. The inspection devices sense flaws by contacting and "feeling" the surface of the moving web.

When defects are encountered, a memory device activates guide fingers which deflect the sheet to the reject pile.

Further information is available from the Dexter Co., Pearl River, New York.

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Offers Web Break Detector

General Electric Co., Schenectady 5, N. Y., is offering a redesigned mechanical web break detector for use with color and black-and-white presses.

Designed for accurate operation at press speeds up to 1,800 feet per minute, the detector consists of a two-pole, normally open interlock operated by an adjustable shoe arm and cam. The contacts are held open when the shoe is riding on a continuous web. When the sheet breaks they are closed by cam action, allowing the shoe to move to the tripped position.

Further information is available from the company.

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Gemco Renamed Vanguard

The Gemco, a web-fed offset press for newspapers, developed jointly by the Reporter Publishing Co. and the Ghormley Engineering & Manufacturing Co., has been renamed the Vanguard.

The press, which is produced by the Offset Process Co., Fort Worth, Texas, will be distributed by Vanguard Sales & Service, a newly formed subsidiary of Orville Dutro & Son, Inc., Los Angeles. (See Oct. ML, page 127.)

Only Motor Driven Arcs Maintain Light Level Constant

STRONG FULLY AUTOMATIC HIGH INTENSITY ARC LAMPS

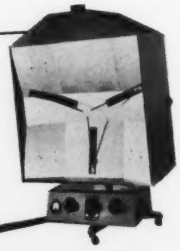
*Strong Camera Lamps cut exposure time to as little as 1/6th. Sufficient intensity to punch through dense Kodachromes. Illumination variables entirely eliminated. Constant color temperatures. Accurate control of densities, regardless of line voltage variations.

*Scientifically precision engineered reflectors assure extreme uniformity of light coverage on your work area. Exclusive with Strong.

*Strong Printing Lamps guarantee sharper reproduction. Dot undercutting eliminated. Overhead models. Burn in normal position, avoiding smoking of reflector and deposit of ash on surfaces in light path. Models for Rutherford and Monotype Huebner photo composing machines assure precise control of intensity for accurate repeats.

TRI-POWER THREE-PHASE PRINTING LAMP

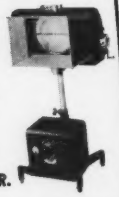
for use with printing frames 50″ x 70″ and larger. Radically different. A trim of three carbons produces a single light source three times as powerful as most printing lamps. Permits accurate compensation for line voltage changes. Finger-tip control automatically separates carbon holders to full expanded length for inserting new trim. Clutch and manual return eliminated. Long life glass-insulated transformers. Exhaust blower. 360-degree rotation.



CHALLENGER 75 and 110 AMPERE CAMERA LAMP

Quick settling of the arc permits accurate exposures of as short as 5 seconds.

140 AMPERE PRINTING LAMP for use with PRINTING FRAMES 40″ x 50″ AND LARGER.



95 AMPERE PRINTING LAMP for use with PRINTING FRAMES UNDER 40″ x 50″.

USE THEM FOR 30 DAYS WITHOUT OBLIGATION TO BUY!

Arrange for free demonstration now!

Strong — GPE General Precision Equipment Corporation

THE STRONG ELECTRIC CORPORATION

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

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Step and Repeat with CARLSON

No matter how many colors . . . step and repeat or single image . . . Carlson's tested *double hole, double pin* system gives you fast, positive registration from the stripping to the press.

CARLSON STAINLESS STEEL REGISTER PINS

Accepted and used by thousands as the finest, easiest to use, and most accurate register pin obtainable. Has thin base and ample thumb space. Cannot corrode or rust and pin diameter is guaranteed within 1/1000th.

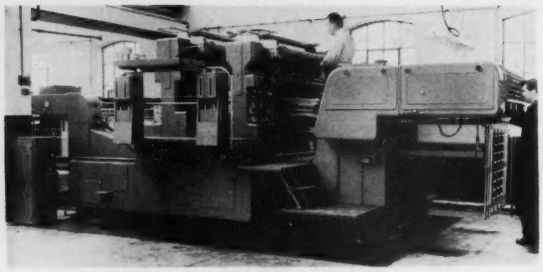
CARLSON PHOTO-COMPOSING SPACER

A precision punch controlling *double hole, double pin* positioning and registration to within 1/1000th of an inch. Will step and repeat vertically or horizontally, excluding exposure time, in less than 60 seconds.

PRODUCTION PRODUCTS FOR GRAPHIC ARTS

Chesley F. Carlson Company

BEN FRANKLIN BUILDING • MINNEAPOLIS, MINNESOTA



New 36 x 50″ Chief 250 offset press introduced by American Type Founders Co. Press is part of a line of high-speed two-color offset presses the company now is offering.

ATF Announces New Press

American Type Founders Co., Elizabeth, N. J., has announced the availability of a new line of high-speed two-color offset presses, the Chief 238, Chief 250, and Chief 255.

The Chief 238 will take a maximum sheet of 25½ x 38″ at speeds up to 7,500 per hour, the company reports. Maximum sheet size for the 250 is 36¼ x 50″, at speeds up to 6,500 an hour. The Chief 255 can take a sheet up to 38 x 55″ at speeds up to 6,000 an hour.

Presses in the new line are constructed with cylinders in 'V' formation. A single set of grippers on one impression cylinder is designed to eliminate register errors.

Other features include a register system which allows the sheet to be registered while over-layed; headstops which can be adjusted while the press is running; a handwheel to adjust the height of the feed-plate for variation in stock thicknesses; and suction roller and over-pile sheet roller.

New Booklets From Mead

Mead Papers Inc., 118 West First St., Dayton, Ohio, has introduced a series of 22 sample booklets incorporating unusual typography for the covers. Bold type faces are used to create a decorative illustration and to identify each grade paper and establish the inter-relationship between the family of products.

•

Adds Web Tension Control

Parsons & Whittemore Graphic Corp., 250 Park Ave., New York 17, has announced that a turnover type center rewind with electronic web tension control now is standard equipment on the "Model America" Cerutti rotogravure press. The company is the distributor of the press in the Western hemisphere.

•

K-C Offers Booklet

"How To Lithograph Coated Offset Paper," a 68-page booklet designed to help lithographers select and use coated papers successfully, has been published in a new edition by Kimberly-Clark Corp.

Written by Robert F. Reed, Lithographic Technical Foundation, the booklet is divided into 51 sections including a coated paper trouble chart. The manual is illustrated with 45 pictures, diagrams and charts. Copies are available from the company, Neenah, Wis., or any of its distributors.

•

Offers New Type Faces

The American Wood Type Manufacturing Co., 42-25 Ninth St., Long Island City, New York, is offering a series of new type faces developed by Stephen Blake & Co., Ltd., London and Sheffield, England.

The new faces are named Amanda, Mercury, Bold Latin, Keyboard and Narrow Sans Italic.

•

Offers Anti-Skid Cartons

An improved skid-resistant shipping carton, treated with Du Pont's "Ludox" colloidal silica, now is being offered by the Nekoosa-Edwards Paper Co.

According to the company, the boxes are 50 percent more skid resistant than mechanical roughened cartons and do not deteriorate with age.

•

Two Bulletins From Ansco

Ansco, Binghamton, N. Y., has released two technical bulletins covering its Ardura Projection and Indiatone Projection papers.

To Aid Litho Program

The National Association of Photo-Lithographers is preparing a special bulletin entitled "Analyzing and Planning Your 1959 Lithographic Program."

•

Offers Camera Booklet

Burke & James, Inc., 321 S. Wabash Ave., Chicago 4, is offering a booklet describing the operation and uses of the commercial view camera, with specific information on the monorail type. Copies are available from Dept. ML-6 of the company.

•

New Carton For Eastern

The Eastern Paper & Pulp division of Standard Packaging Corp., now is packaging its Manifest grades in new printed cartons.

•

Art Directors Issue Annual

The 1958 Art Directors Annual, published early this month by the Art Directors Club of New York, reproduces in color or black-and-white the 558 entries accepted for showing in the 37th annual exhibition of advertising and editorial art and design held at the Waldorf-Astoria last Spring.

The volume combines offset lithography and letterpress.

•

Harris Installations

The following companies have purchased Harris-Seybold Model 238 25 x 38″ two-color offset presses: Commonwealth Press, Inc., Chicago; Excello Press, Inc., Chicago, two presses; Color Lithographers, Inc., New York, two presses; and General Reproductions, New York. Rich Printing Co., Nashville has purchased a Model 130-Fr, 23 x 30″, two-color offset press; and St. Lawrence Lithographing Ltd., Montreal has purchased a Model 236, 23 x 36″ two-color offset press.

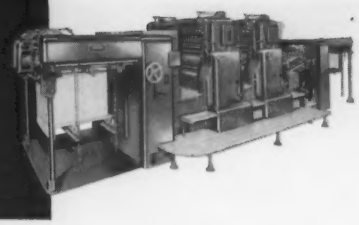
•

Named Los Angeles Manager

Sinclair & Valentine Co. has announced the appointment of Douglas Paterson as manager of the printing ink manufacturing company's Los Angeles branch. He succeeds Alfred Seth, who has adopted a lightened schedule because of his health.

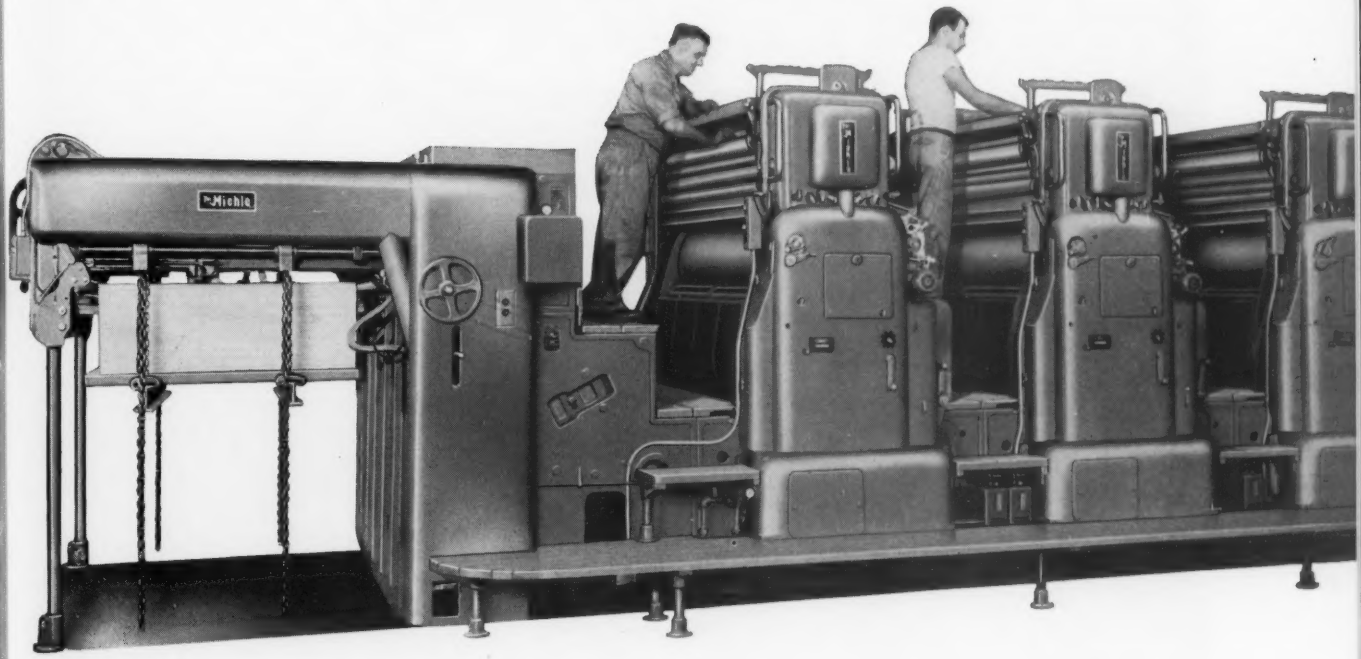
The Miehle

61 AND 76 OFFSETS



Years ahead...

IN DESIGN AND PERFORMANCE
TO MAKE THE BIG JOBS MORE PROFITABLE



Just a look at the outward appearance of the Miehle 61 and 76 and you'll see that they're modern...years ahead in design. You can see that they're built low with few steps for the pressman to climb...that there's plenty of working space... that all controls and adjustments are within reach—easy to get to. These are the modern points which save pressmen time and trouble and reduce non-productive downtime to the absolute minimum. And there's more—*inside*—that's years ahead. Automatic and sealed-in lubrication, True Rolling Cylinders, swing gripper transfer, unit construction...these are just a few of the years ahead performance features. In the last five years alone more than forty significant improvements have been incorporated into these presses!

Outside and in, the Miehle 61 and 76 Offsets are years ahead in design and performance...to do the best lithographic work...to make the big jobs more profitable.

Write for full details and listing of improvements today.

THE **MIEHLE** COMPANY

A DIVISION OF MIEHLE · GOSS · DEXTER, INC.

Chicago 8, Illinois

THE WORLD OVER

KLM

ROYAL DUTCH AIRLINES

"The time just flew!"

You've crossed the ocean — and it's hard to believe the trip is over so soon. But it's easy enough to understand once you've flown KLM. There's such solid comfort. And such a friendly climate aboard. What's more, the cuisine is superb. Why, even the simplest fare becomes a delicacy in the artful hands of a KLM master chef.

These are just a few reasons why people who travel often by air take the Royal Dutch route — to all points of the globe. Next time you plan a long air trip, why not shorten the miles? Let a KLM flight crew give you all the attention in the world. It makes such a royal difference. See your Travel Agent or call your nearest KLM office.

KLM Royal Dutch Airlines, 430 Park Avenue, New York 22, N. Y.

Photo Color Reorganizes

The Photo Color Co., 6516 Detroit Ave., Cleveland, has recently reorganized its plant, purchased a new proving press and installed air conditioning. The added facilities are expected to increase quality and service.

New officer of the firm include William Gish, president; Jake Ferenz, vice president; John Fleps, secretary; and Siegfried Riechert, treasurer. Frederick Kruse, former owner, will remain with the company as a salesman and advisor on the board of directors.

•

Discusses Negative Color

Eastman Kodak Co., last month presented a talk by Floyd McCall, chief photographer for the Denver *Post*, through a tape recording and slides, to a group of editors in the New York area.

The talk ,entitled, "Negative Versus Positive Color," was followed by a question and answer period conducted by J. Winton Lemen of Eastman.

•

Poster Deadline Nears

Entries for the competition to design a poster for the Seventh Educational Graphic Arts Exposition must be mailed to the poster committee chairman, American Institute of Graphic Arts, 5 East 40th St., New York, before midnight, Jan. 30.

The competition is open only to professional designers and offers a top prize of $1,000.

Entry blanks or further information can be obtained from AIGA or National Graphic Arts Expositions, Inc., 5728 Connecticut Ave., N.W., Washington 15, D. C.

•

New Litho Chemical Can

Litho Chemical & Supply Co., Lynbrook, N. Y., has introduced a newly designed lithographed can for packaging many of its chemical products. The can features a dripless spout.

•

Urges Better Cost Controls

Floyd C. Larson, secretary-treasurer of the International Association of Electrotypers & Stereotypers, Inc., told Buffalo, N. Y. Printing House Craftsmen in a recent talk that they should prepare an accurate monthly balance sheet and operating statement and should maintain a good cost system tailor-made to fit the size and need of their business.

Stressing the importance of plant operations analysis through adequate cost control, he advised printers and lithographers to employ a trained accountant either on a full or part time basis.

PDI Moves Studio

Printing Developments Incorporated is closing down its San Francisco scanner studio and moving it to another, as yet undetermined, location. The studio was established in 1956 with the installation of the scanner, and a camera for making transparencies from reflection copy was added the following summer. Customers previously served by the San Francisco studio will henceforth be served by the PDI studio in Chicago.

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MONEY on the LINE
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BE SURE of the NAME BEHIND IT!

When you invest in equipment you look for economy of operation, long life, dependability and prompt efficient service. Before Besco sells any equipment all of these things are checked. That's why equipment from Besco will meet your most exacting requirements! Besco sells a complete line!

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CHICAGO — 900 N. Franklin St.
(SALES OFFICE ONLY)
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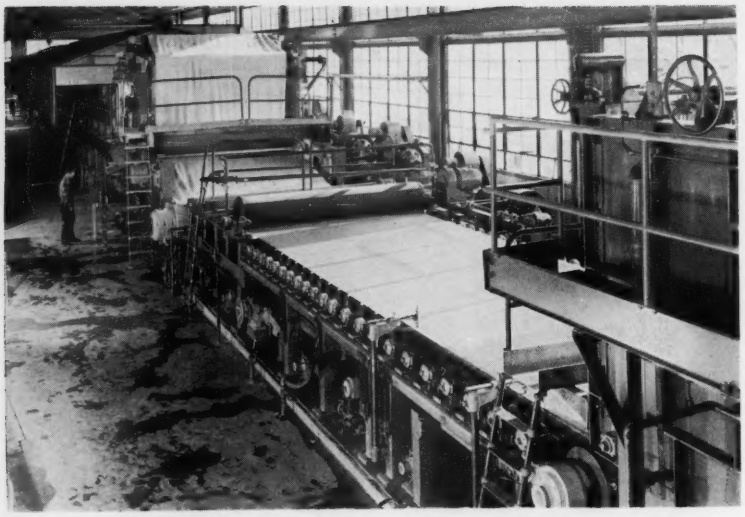

New Black-Clawson paper machine installed at Hamilton Paper Co.'s Miquon plant is equipped to produce bond, offset and reproduction papers in accordance with the most modern practices. It will manufacture from 70 to 80 tons a day. Machine was erected in 59 days.

'Hugo' Now Operating

A major expansion program started nearly two years ago by the Hamilton Paper Co., Miquon, Pa., reached its final stage last month when a new Black-Clawson paper machine, named "Hugo," became operations.

The new machine permits the retirement of two of the existing seven machine and provides for an overall production increase of more than 30 percent. The machine, operating at speeds of 1,200 feet per minute, will produce upwards of 140,000 pounds per day of a wide variety of high quality papers. In comparison, Hamilton's first machine, installed in 1856, produced only 3,000 pounds per day.

The expansion program was started in April, 1957 when ground was broken for a warehouse providing new paper shipping facilities and more than 60,000 sq. ft. of additional paper storage area. Provision was also made for additional pulp handling capacity and new power and steam generating facilities. The expansion also included new cutter room facilities, a 100" Harris cutter and other equipment.

Names Two Mill Managers

The International Paper Co. has announced the appointment of Laurence G. Thurston as manager of its Niagara Falls Mill and Allan B. Copping as manager of its Otis Mill in Chisholm, Me.

Mr.Thurston replaces H. Perry Bailey, who has retired after 38 years with the company. Former manager of the Otis Mill was Thomas G. Mangan who retired last month after 42 years with the company.

•

UARCO Honors 40

UARCO, Inc., manufacturers of business forms, paid honors to 40 employes with long service records at a Quarter Century Club banquet Dec. 9, in Chicago. The group included 30 from Chicago and 10 from plants and sales offices in other cities.

Walter R. Barker, chairman of the board, presented engraved watches to persons who completed their 25th year of employment in 1958. Fifteen others, marking 30, 35 and 40 years with the firm, received an additional diamond in their service pins.

•

Named To Champion Post

The Champion Paper and Fibre Co., Hamilton, O., has announced the appointment of Maj. Gen. Alfred H. Johnson, U.S.A.F., Ret., as special assistant to Henry W. Rigby, executive vice president, corporate development.

Six More Join Council

The following are six more companies that have joined the Education Council of the Graphic Arts Industry since Sept. 1, 1958: Mennonite Publishing House, Scottdale, Pa.; John C. Motter Printing Press Co., York, Pa.; Sowers Printing Co., Lebanon, Pa.; Printing Industry of the Carolinas, Inc., Columbia, S. C.; Stafford-Lowden Co., Fort Worth, Texas; and North Pacific Bank Note Co., Tacoma, Wash. (This completes a listing started on page 94 of the December issue.)

•

Named Interchem VP

Frederick A. Weymouth has been appointed vice president of Interchemical Corp., responsible for production, planning and purchasing. He had been vice president of the company's Printing Ink division since 1950.

Succeeding Mr. Weymouth as IPI vice president is Victor J. Porth, Jr., who was manager of the firm's Elizabeth, N. J. plant. He in turn has been succeeded by Harvey Muller, former manager of the IPI Battle Creek, Mich., factory.

•

To Head M-G-D Research

Miehle-Goss-Dexter Corp. has announced the appointment of John W. Hill as director of Market Research. He was formerly with the Mergenthaler Linotype Co., in a similar capacity.

•

To Direct Oxford Research

George S. McKnight has been appointed director of research for the Oxford Paper Co. in Rumford, Me. He succeeds Paul M. Schaffrath who has resigned to become mill manager for the Great Northern Paper Co., Millinocket, Me.

Mr. McKnight joined Oxford in 1945 as a senior research worker and has been assistant director of research since late 1953.

The company also has announced that John H. Vogel, former economist for the American Paper & Pulp Association, has joined the company as marketing research manager.

Save $1 by entering a GROUP subscription to MODERN LITHOGRAPHY at $2 each.

Save $1 each over the regular rate of $3 a year, in U. S.
CANADA: $2.50 each (regularly $4); FOREIGN: $6 each (regularly $9)

Use form below for group of **Four or more** subscriptions and mail with remittance to MODERN LITHOGRAPHY, Box 31, Caldwell, N. J.

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CALDWELL, N. J.

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VARIATIONS

(*Continued from Page* 36)

to be reasonably accurate. The reciprocity behavior of a particular emulsion, fortunately, will not vary greatly from batch to batch or during storage.

In view of the known reciprocity characteristics of litho-type emulsions, cameramen should be guided by the following fundamental rules:

1. The performance of a line and halftone film can be determined only under the actual conditions of use.

2. To be completely valid, comparing the performance of two or more films must include all of the possible exposure conditions likely to be encountered in daily use.

3. Maximum operating efficiency may require the use of more than one brand or type of film.

4. Exposures suggested in instruction sheets will be valid only if exposure conditions are identical in all respects. The same holds true when applying to one camera the techniques worked out on another.

5. The commonly accepted rules governing the relationship of lens apertures, distance between lamps and copy board, etc., normally used in calculating exposure, are not reliable unless modified to include a compensating factor for the reciprocity effect of the emulsion being used.

In subsequent articles other operating variables will be discussed. Some of these contribute directly to exposure errors or create conditions that introduce reciprocity failure.★

PHOTO CLINIC

(*Continued from Page* 52)

possible that water could contain a number of impurities which produce different defects and require different corrective measures. The chemist who analyzes your water can best advise you as to corrective measures.

For the benefit of other readers a general review of the problem might prove enlightening.

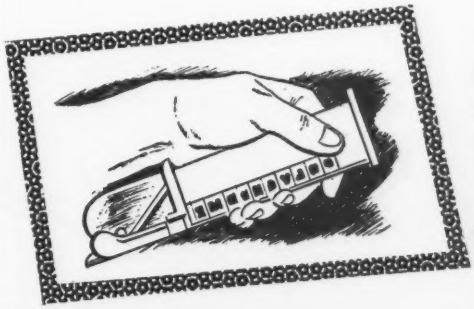
Impurities in water may be any one or more of the following; soluble mineral salts, bacteria and minute solid particles such as rust, grit, decayed vegetable matter, etc.

Soluble mineral salts may react with processing solutions and alter their action to cause fogging or deposit a precipitate on the negative during processing. Soluble salts in the wash water often crystalize out on the emulsion surface upon drying.

Eliminating soluble impurities is possible by means of distillation or filtering devices containing special chemicals. The latter process is called demineralization and the treated water is virtually as pure as distilled water. It is also possible to add chemicals to the water which neutralize the impurities, precipitate them or change the salts to a form that does not produce undesired reactions with the processing chemicals.

Bacteria can cause chemical reactions as well as attack the gelatin of the emulsion directly, but this condition is only rarely encountered in modern communities.

Solid matter, such as rust and grit, might, under certain conditions, result in chemical reactions. In most cases though, the defect is of a physical nature. Solid particles adhering to the emulsion during development would prevent or retard development, thus causing transpar-



YOUR PROOF PRESS AND POLYCHROME'S P/C KOTE OFFSET PLATE WILL MODERNIZE YOUR SHOP!...

COMBINATION SHOPS! LETTERPRESS SHOPS! SHOULD KNOW . . . You can modernize your printing operations by using the Polychrome P/C Kote Offset Plate. This plastic fibre base plate will accept a direct image from inked type and cuts. A compositor may set his regular type and cuts and lock up in a proof press. The type is inked and a P/C Kote Offset Plate is laid down. The resulting positive image will dry hard and quickly on the P/C Kote Plate. The plate is then mounted on an Offset Duplicator, and the job run off.

P/C KOTE MEANS A LETTERPRESS SHOP MAY ENTER THE OFFSET BUSINESS WITH A MINIMUM EXPENDITURE . . . All that is necessary is an offset duplicator, chemicals, inks, and P/C Kote Offset Plates. No necessity for lights, darkroom, and camera equipment until the offset business materializes.

P/C KOTE OFFERS PRINTERS A VERSATILITY IN OPERATION NEVER BEFORE POSSIBLE... Instead of letterpress being bogged down with dozens of short run jobs, now they can be transferred to offset; while the letterpress may be used for more important and profitable work.

P/C KOTE ENABLES THE PRESSMAN TO "GANG-UP" AND "STEP-UP" JOBS... on a single plate, permitting more work to be done faster.

P/C KOTE SAVES MONEY ON METAL OF STANDING JOBS IN THE GALLEY... No longer is it necessary to invest large sums in jobs that have to stand around to be repeated. Several P/C Kote Plates may be made from the original type and stored in a regular filing cabinet for future re-runs. Type may be broken down and reused promptly, releasing large sums of money for other business uses.

P/C KOTE RELEASES SPACE NORMALLY OCCUPIED BY LARGE GALLEYS . . . for other uses.

Please send me more information about P/C Kote Offset Plate for Proof Press Application.

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FREE BOOK!

Send me my Reference Guide to DIRECT IMAGE PLATES!

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We have an offset duplicator.
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YOU can secure a very helpful bulletin, for use in

ANALYZING AND PLANNING YOUR 1959 LITHOGRAPHIC PROGRAM

This "meaty" Bulletin will carry provocative questions and suggestions on lithography, which you can pass along to your sales manager, estimator, cost man, superintendent and others for comment.

Actually, it will carry constructive suggestions on how a lithographer might plan his business for the New Year. Here are some of the factors to be covered:

BUDGETING YOUR SALES AND PRODUCTION FOR 1959

A SUGGESTED ADVERTISING PROGRAM FOR A LITHOGRAPHER

BUILDING A LITHOGRAPHIC SALES PROGRAM

COSTING, ESTIMATING AND ORDER WRITING — Constructive suggestions dealing with the questions: "Do we actually know the hourly cost of all our lithographic departments?"
"Do we actually have our own production standards for all work operations?"
"Do we actually have a sound schedule of mark-ups insofar as customers, salesmen and the house are concerned?"
"Are all estimating factors sound, up-to-date and adhered to?"
"On each job, do we compare actual cost with the estimate?"

PRODUCTION PROCEDURES — Suggestions on materials, method and equipment.

MANAGEMENT — An appraisal of some of the problems that constantly bedevil management again with suggestions on what might be done to minimize or eliminate difficulties.

This vital bulletin will carry the kind of information and questions a lithographer can pass on to his keymen, with the suggestion that they study this material carefully and then come to a meeting of shop and plant management to discuss the points mentioned in the bulletin particularly as they apply to your plant.

This bulletin, used to advantage, should be worth far more than the nominal cost of belonging to the NAPL.

You can secure this PLANNING Bulletin, simply by filling in the coupon below and returning it with a check for the first year's dues.

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We hereby make application for enrollment as an Active (Associate) Member in The National Association of Photo-Lithographers, and if elected, agree to abide by its By-Laws and support its objects and interest as far as our time and ability will permit.

We enclose herewith $..... as our first year's dues. Annual dues for our press equipment will be:

No. of Presses	ACTIVE MEMBERS		
	Presses smaller than 17" x 22" (Minimum Dues $50.00 per year) $20.00 per press per year	$	
	Presses 17" x 22" to 22" x 28" ..... $28.00 per press per year	$	
	Presses larger than 22" x 28" up to and including 35" x 45" $37.00 per press per year	$	
	Presses larger than 35" x 45" ..... $47.00 per press per year	$	
	ASSOCIATE MEMBERS	$	
	Equipment and Supply Dealers and Manufacturers ..... $125.00 per year		
	Minimum Dues, $50.00 per year. Total	$	

Firm .....

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Signed ..... Phone .....

ent spots in the image. Particles that remain attached to the emulsion, or imbedded in it, cause opaque spots. Rust may generate stains and both rust and grit can scratch the emulsion. Impurities held in suspension in the water often attach themselves to the film surface in the form of scum.★

PRESENSITIZED PLATES

(*Continued from Page* 49)

gives him a fighting chance to hold open fine shadow detail.

The processing of FotoPlates is very simple, requiring an exposure time about the same as a whirler-coated casein plate. To be more specific, the No. 5 step on the gray scale is correct.

After exposure, a developing ink is applied. Here again the developer is very similar to the ink used on whirler-coated plates, the only difference being that it contains no lacquer or asphaltum. Lacquer would attack the plastic printing surface and give an all-over tint. We find that asphaltum has a tendency to smear and drag in the shadow areas during developing. The developing ink does not have to be rubbed down or fanned dry. After the application of the developer, the plate is washed using a damp cotton swab, and the operation is carried out on a table top in order to keep back as dry as possible.

The only other step is to desensitize, using one ounce of 14 Baumé gum in four ounces of water. Any of the gums used in the lithographic trade may be used. The purpose of this desensitizing step is not to protect the non-printing areas; rather, if the light-sensitive material is not entirely removed, it would dry down and re-expose. The mixing of the gum with the remaining light-sensitive materials kills its action so that it cannot re-expose in the daylight or under a fluorescent lamp.

Because the plate is .012″ thick, a minimum of packing is required on the press. You do not have to bend the clamp edges of the plate; because it can very easily be slipped into the clamps with the flat of the hand. Press settings are about the same as for other presensitized plates, that is, slightly underpacked, up to .0145″ rather than .015″. The fountain solutions may remain the same as with conventional plates, and regular inks may be used. Of course, as with any presensitized plates, the more fluid type inks give the longer run. Actually, we tell the pressmen when we demonstrate the plates to forget what the basic material is and run it the same as they would any metal plate.

We find that we arrive at a saleable sheet a lot faster than with grained plates and somewhat faster than with presensitized metals. Using the correct exposure and using the same negatives as a companion, we believe the quality of print obtained from FotoPlates equals—and in most cases betters—any other plate using the negative process.★

GOLDENPLAST*

A new ORANGE masking plastic for layouts that

"HOLDS-TO-SIZE"

*GOLDENPLAST masking plastic — new formulated medium, replacing Goldenrod papers for those difficult "hard-to-register" jobs.

SEE THE DIFFERENCE!—Save Time—Save Money—today! Get GOLDENPLAST *the orange masking plastic.*

See the difference in features —

- Solves Misregister problems (in all climatic conditions)
- Available for all press sizes
- Easily cut
- Used for dropouts
- Thin base
- Available in rolls too

Special production method makes GOLDENPLAST available at these competitive low prices—

PRICE LIST

Sheet Size (All sheets cut square and packed flat at no additional charge.)	Package	Price	Sheet Size	Quantity	Price
11″ x 14″	100	$ 8.50	42″ x 54″	50	$45.50
14″ x 17″	100	12.00	46″ x 56″	50	55.50
16″ x 20″	100	14.00	48″ x 60″	50	62.00
20″ x 24″	100	20.50	54″ x 60″	50	65.00
20″ x 27″	100	22.00			
24″ x 27″	100	30.00			
24″ x 30″	100	31.50			
27½″ x 31″	100	38.50			
27″ x 38″	100	41.00			
30″ x 40″	100	48.00			
38½″ x 54″	50	41.50			
40″ x 50″	50	41.00			

ROLLS

54″ x 100 ft.	$ 25.00
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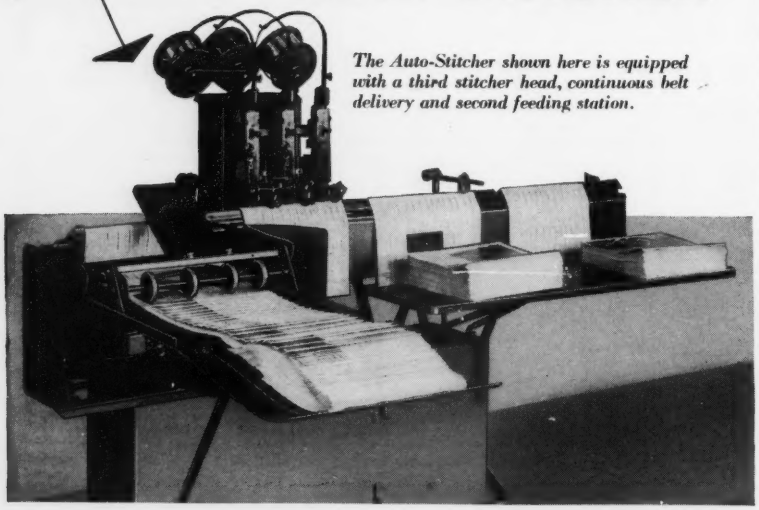

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World's Largest Manufacturers of Perforators, Wire Stitchers and Paper Punching Machines

WEB OFFSET

(*Continued from Page 46*)

printed on both sides in two colors, the other two printed in one color on each side. Finally, four webs can be run through the press. Here each web is printed in one color on both sides. These presses usually employ a folder to deliver a finished signature but may also have a sheeter or rewinder.

All web-offset presses employ one of these four designs. Each has its advantages and disadvantages. Some lithographers feel that a steel impression cylinder gives a better image than the blanket to blanket design. The blanket to blanket advocates feel that there is no dot deterioration and they like the perfecting feature. The drum and modified drum users feel that they have better register control because the colors are printed down one time while the web is under complete control, wrapped around the impression cylinder. The decision as to what design to employ in your press depends on how you feel about the claims and counter charges, the amount of money you are willing to invest in a press, and the type of product you intend to produce.

NEXT MONTH: *What is available?*

TECH. BRIEFS

(*Continued from Page 74*)

acidity adversely affects ink drying more in conjunction with high humidity. The problems of paper makers in meeting RH equilibrium conditions are discussed.

Lithography—General

PRINTING ALUMINUM FOIL. James T. Trousdale. *Graphic Arts Monthly,* Vol. 30, No. 5, May 1958, pp. 42-51, 10 pages. Production of aluminum foil more than doubled since 1952. Three-fourths is used in packaging. Various properties of foil are listed. It is claimed that transmission through a .0035" film is negligible. Foils are coated with nitrocellulose or vinyl lacquers before printing to give an adhesive base for ink. The viscosity of ink is critical in printing foil by gravure. Lithography on foil laminates can be carried out with 130-150 screens, but set-off is a difficult problem, and even more so in the case of letterpress. Albuminum plates are not recommended for foil printing.

Comment: A problem in use of foils as vapor or liquid barriers in packaging is

pin hole leakage which occurs frequently.

KEEPING PACE WITH PROFITS, PART 6. C. W. Latham. *American Printer and Lithographer*, Vol. 139, No. 6, June 1958, pp. 36, 39-40, 3 pages. Today, more than ever during the last 10 years we are interested in cost. We are interested in reducing prices without losing profits. We cannot resort to cheaper and inferior products or reduce maintenance of equipment. But what we can do something about is waste of time. Incorrect allocation of work within the camera, stripping and platemaking departments may not increase total production hours but very obviously increases cost.

Graphic Arts—General

XEROGRAPHIC PRINTING TECHNIQUES. Jeremy Hunt. *Modern Lithographer and Offset Printer*, Vol 54, No. 6, June 1958, pages 11-15, 5 pages. The economy, speed and simplicity of making small offset plates by the Xero X equipment is discussed. Runs on paper masters of up to 10,000 impressions can be expected. A cost breakdown and a discussion of the quality and type of work for which the equipment has been used covers many questions which concern the litho printer who may be interested.

*ELECTROPHOTOGRAPHIC PRINTING PROCESS. U.S. Patent 2,829,050 96/1 February 23, 1952-April 1, 1958. W. C. Huebner to The Huebner Company. *Ansco Abstracts*, Vol. 18, No. 5, May 1958, page 193. Images are projected from a film onto the printing material which has been given a positive or negative charge. The exposure reverses the charge and a negatively charged smoke or vapor is deposited on the positively charged areas of the printing material. An apparatus is sketched but nothing is disclosed about the materials to be used. —13 process claims.

*XEROGRAPHIC CAMERA. U.S. Patent 2,831,409. July 18, 1955, Serial No. 522,540. William E. Bixby and Robert S. Kriss, assignors to the Haloid Company, Rochester, N.Y., a corporation of New York. *Official Gazette*, Vol. 729, No. 4, April 22, 1958, page 792. 1. A xerographic camera comprising a light-tight box-like structure having a lens element mounted in one wall thereof, a shaft journaled in said structure for rotation about an axis parallel to the focal plane of the lens element, plate holding means arranged on said shaft to support a xerographic plate in the focal plane of the lens element, a second shaft journaled in said structure for rotation about an axis parallel to the focal plane of the lens element, a xerographic plate charging unit fixed on said second shaft, a development assembly supported on a second wall of the box-like structure, means to rotate the second shaft to move the charging unit into and out of charging relationship with a plate supported in the plate holding means, and means to rotate, the first shaft to move the plate holding means to a position to place a plate supported therein in operative relationship to the development assembly.

HOW LAMINATION CAN INCREASE SALES AND MARKETS. Gerard M. Milano. *Graphic Arts Monthly*, Vol. 30, No. 5, May 1958, pp. 28-38, 224, 12 pages. Lamination is distinguished from varnishing and lacquering with plastic coatings since the plastic is bonded over the printed matter, and imparts new physical properties to the product. The sheet-to-sheet platen method or roll fed method may be used. Adhesives dispersed in solvents are used. Tests cited in which gloss in light colored areas of 70# coated litho stock was increased by 93% by lamination with .00088" cellulose acetate film. Scuff, ear, and fold strength are enhanced. The publishers of juvenile books are the largest users at present because of the soil proof feature of lamination. Other uses are cited, as well as nine practical notes concerning use.

RUSSIA ACTIVE IN GRAPHIC ARTS RESEARCH. Anonymous. *The R. & E. Coordinator*, Vol. 4, No. 2, April 1, 1958, pp. 6-7, 2 pages. This article highlights the equipment, personnel and various departmental projects of the Soviet Union's three graphic arts research institutes.

HERE IS SIMPLIFIED QUALITY CONTROL. Warren L. Rhodes. *Printing Production*, Vol. 88, No. 10, July 1958, pp. 36-38, 3 pages. A lot of the material which has been written about quality control is

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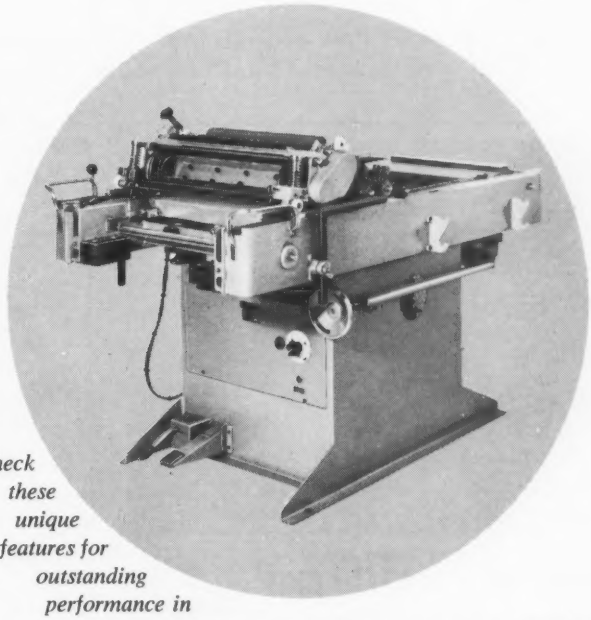

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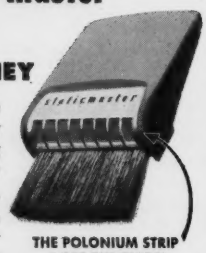

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   - ☐ Other employe (please specify)
2. ☐ Letterpress printing plant including employe (if you also do lithography check under No. 1 above).
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the result of people joining the movement because of its popularity, without realizing what it is all about. The author's purpose in preparing this article is to introduce some of the concepts of statistical quality control, and to explain how the techniques may be used.

PRODUCTION CONTROL FOR SMALL PLANT. D. J. Wickizer. *Inland Printer,* Vol. 141, No. 3, June 1958, pages 43-6, 4 pages. A good practical schedule procedure that keeps tab on every job. All the forms for underwriting, job planning, scheduling and filing are illustrated and described in detail. This system works nicely for a load of 200 or more jobs in process.★

DOUBLE-COATED PAPERS

(*Continued from Page* 71)

chine trailing blade coater at Consolidated points in this direction.

The theory looks good, and extended research seems to confirm it. It should be clear to all, however, that no commercial installation of this type has yet been completed. There is no reason to believe that this combination of coating units will reduce production costs. In fact, the cost of additional equipment would seem to point the other way. Certainly, there is no reason to delay purchasing in the expectation of getting stock later at lower cost or of unusual quality.★

COST CONFERENCE

(*Continued from Page* 38)

Arthur Clark, CPA from Philadelphia; Fred Hoch, CPA from New York; and John Hallstrom, of Edward Stern & Co., Philadelphia.

Questions and Answers

Following are some of the questions handled by the panelists:

Q: How many litho shops are setting up salvage value for lithographic equipment?

TURNER: NAPL survey showed 25 percent of firms are doing this, for tax purposes. Average value is five to 12 percent.

Q: Are many lithographers using Sum of the Digits or the Accellerated methods of depreciation, rather than with Straight Line?

TURNER: About 50 percent still are using Straight Line. CLARK: Replacement costs should always be used in figuring depreciation. Studies of PIA ratios show material costs jumped markedly in the past few years, using 1955 as the base year. This change in depreciation is not due to declining sales, but to increased cost of replacement.

Q: In the cost sheet we studied this morning, no separate listing was made for capital investment. Why not?

SODERSTROM: Cost of investment should be included in the individual costs on the work sheet.

Q: An estimated job was billed at a substantial loss to our company. Should the salesman and the customer be told?

HALLSTROM: If the salesman provided insufficient information for the estimating department, he should be told. Customer should not normally be told if it's the salesman's or the plant's fault. But if the customer is at fault or is excessively demanding after the job is started, the costly ad-

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Turner, Soderstrom and Rinehart at NAPL cost conference in Philadelphia.

ditional features should be pointed out to him.

Q: Are stock storage, handling, delivering, etc., included in budgeted hourly costs?

TURNER: No provision has been made on the sample work sheet. Most plants include these items under general factory expense. SODERSTROM: Lithographers are justified in pricing paper by the unit, even when buying it at a saving in carload quantities.

Q: Is selling commission included in the 25 percent markup in manufacturing costs shown on the work sheet?

TURNER: No. It should be handled as a job cost, depending on the percentage in the shop. If the salesman is on straight salary, it should be in the markup, however.

Q: Should we add a markup to the estimate if the customer is to supply paper, reproduction proofs, etc?

HOCH: You should mark up paper because you have to handle it.

Q: How are price lists set up?

SODERSTROM: Usually by using the costs of a competitor. Most price lists are set up by shops which don't know their hourly costs.

Q: How far should we break down costs to the customer?

HALLSTROM: Minimum breakdown is desirable, unless required by the customer. Extensive disclosure of costs might give the customer an inconsistent picture of your operation, if they vary from month to month, and he might decide to purchase certain items on his own.

Q: Should the cost of producing a job on wrong size equipment, or of a job not suited to the shop be added to the estimate?

SODERSTROM: No, it should be charged to bad management.

During the afternoon session Mr. Soderstrom presented a gift to Joseph H. Winterburg, of Phillips & Jacobs, Inc. for the work he did in handling reservations and other details for the meeting.

In addition to Mr. Winterburg, Mr. Schaubel and Mr. Rinehart, eight other lithographers from Philadelphia area plants served on the arrangements committee.★

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Forms New Firm

William E. McLaughlin has announced the formation of the Graphic Arts Equipment & Supply Co., San Francisco, of which he is president. The company has purchased the Harry W. Brintnall Co. outlets in San Francisco and Seattle.

PRINTING WEEK

(*Continued from Page* 41)

have been sent to Milwaukee schools and libraries. Special movies, plant tours and speakers have been made available.

An exhibit of locally printed material and rare book editions will be held at the public library Jan. 11-31. The exhibit, sponsored by the Graphic Arts and Advertising Guild will be open to the public during regular library hours.

General chairman of the PW program is Roy DesJardins, of Graphic Arts & Advertising Guild. Jack Miller, of the Litho Club, is on the committee.

Boston

Ten Boston graphic arts groups will sponsor a week-long series of events from Jan. 10-17 during the 13th Annual Printing & Publishing Week of New England, as PW is known in this region.

Albin R. Johnson, of the Litho Club, is general chairman of the event, assisted by a 100-man committee.

Mr. Johnson, who is immediate past president of the Boston Club of Printing House Craftsmen, reports that features will include the Direct Mail Day Luncheon in collaboration with the Advertising Club of Boston and the Advertising Production Club of New England, Jan. 13, at the Statler Hilton Hotel.

At the P&P Week banquet at the Sheraton Plaza Hotel on Jan. 15, the new "Benjamin Franklin Award for Distinguished Service in the Graphic Arts" will be presented to a New Englander for outstanding contributions in this field.—*Sidney James Paine.*

Chicago

In Chicago, Printing Week will be observed with the traditional wreath laying ceremony at the statue of Benjamin Franklin in Lincoln Park, followed by the regular monthly meeting of the Craftsmen's Club Jan. 16, at which the significance of the week will be accented by a speaker not yet chosen at press time. Dinner at the Furniture Club is planned for 400 to 450 persons.

This subdued program was agreed on, said E. G. Hubbell, executive of Neely Printing Co. and chairman of the Craftsmen's Printing Week comcittee, after abandonment of earlier plans for an elaborate city-wide celebration in keeping with Chicago's eminence as a graphic arts center. Forty-one printing and allied organizations had agreed to cooperate in the larger program as first proposed, he said, before it was vetoed.—*H. H. Slawson.*★

LETTERS

(*Continued from Page* 18)

b) forms and invoices
c) commercial advertising printing
d) trade papers, house organs, etc.
e) books
f) labels

If it is not possible for you to send this information to us, we would be grateful if you advised us where we can get it.

We are of course willing to pay for the expenses, or else give you information in return about Swedish printing industry, which we know very well as we are the biggest printers in Scandinavia.

Olle Hamberg
Ahlen & Akerlunds Förlags AB
Stockholm, Sweden

You aren't the only one who has trouble assembling authoritative information about annual sales volume of the graphic arts industry in the U. S. Such figures are extremely hard to come by. As a starter, may we suggest the Bureau of the Census (Washington 25, D. C.) statistics, the latest of which are included in Bullein MAS-56-1 Rev., available at 25 cents a copy. These reports show such things as number of establishments, employes, value of shipments, value added by manufacture, type of work performed, etc. We are sending a tear sheet of our latest article, "Litho Growing Fast," based on these figures. I suggest you contact the Lithographers and Printers National Association, 597 Fifth Ave., New York; the National Association of Photo-Lithographers, 317 West 45th St., New York; and the House Magazine Institute, 4 Irving Place, New York; in addition to the Bureau of the Census, for further information on these subjects. — *Editor.*★

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PAGE

(*Continued from Page* 51)

I.B.M. Justifiers and a Varityper.

Big Saving for Elections

Elections in California usually are affairs of high interest to the state's voters but recently lithographers have been even more excited about the business possibilities of doing work for the government in this important field.

In the last presidential contest, election notices were printed by web-offset for the first time in history for Los Angeles County. Page Lithograph did the job by taking the I.B.M. copy in a continuous roll, as supplied by the registrar of voters, pasting it up oversize, shooting to the page size and running on the web-offset press. Handling the copy directly eliminated any chance of error and no typesetting was involved.

Previous printing cost was $14,000. Page Lithograph did this job for the county for $2,500! Other lithography shops in the area have since shared in this new opportunity for lithography.

Page Lithograph's new web-offset press, running at a speed of approximately 30,000 sheets an hour, promises to be a real money-making workhorse for the company.★

PRODUCTION CLINIC

(*Continued from Page* 66)

ing of the job depends largely on the tension and accuracy of mounting the blanket. To prove this, loosen the blanket a few notches on the back end and the print will become long across the cylinder and around the cylinder as well.

You can use this method of loosening the blanket to great advantage, when running a job that has fanned out and is out of register on the back end of the sheet. In printing the second, third or fourth color, loosen the blanket two or three notches and you will gain about one or two lines of register. I do not advise any more than three notches, especially when more colors are to follow the one you are printing.

Another important fact often overlooked when mounting blankets is the necessity of mounting it perfectly square and parallel to the cylinder. The pressman should always be sure that the blanket is fastened into the bars accurately before mounting it onto the cylinders. Another thing to watch for is loose screws. A loose screw may cause no end of trouble. If the blanket should pull out slightly the area may soon be out of register. On some jobs this may not be detected until after the color run has been completed and the succeeding color cannot be brought into register.

Blanket Care

The best method for washing a blanket is to use both hands, wetting or washing with one hand and immediately drying with the other. Many times you see workers wetting the blanket all over and then drying it. This allows the solvent to penetrate the rubber, which can cause swelling. It is very good practice to alternate weekly two or three blankets. Each time the blanket is changed, wash it thoroughly with a good solvent. If it is embossed it should be pumiced and hung in a dark, cool place. You will get many more impressions out of each blanket if you learn to handle them with care.★

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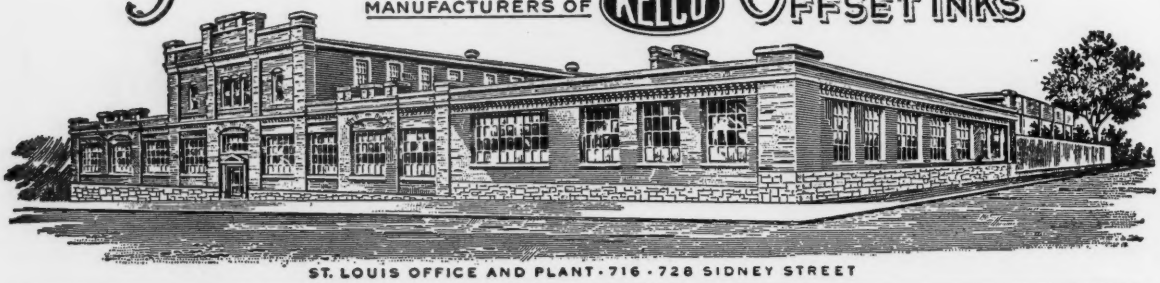

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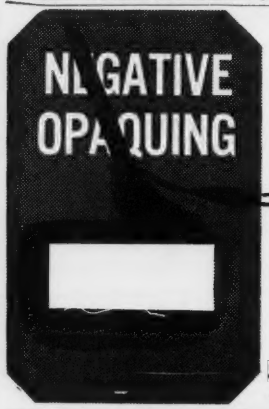

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DAVAC

(*Continued from Page* 42)

which Davac offers to the lithographer?

1. It remains flat under normal atmospheric conditions and will not curl even under extreme humidity, excessive dryness, or abnormal heat, anymore than a non-adhesive coated paper would tend to curl.

2. It is not a synthetic. Rather, Davac-S (the adhesive) is an animal glue base product. This gives it an exceptionally fine bond.

3. Even ink reception can be expected, the company states, and even the adhesive can be used as a printing surface. This is important for "look-through" bottle labels and window stickers.

4. It moistens uniformly because of the regularity and multiplicity of pores. It moistens deeply, with an action similar to a sponge.

5. Tack range is wide and the adhesive qualities are not lost quickly because the adhesive is an expansible-compressible coating.

6. Printed labels can be stored for long periods without cracking or curling.

Simply stated, development of manufacturing methods in connection with Davac production involved the idea of breaking up the glue before it was coated and at the same time binding the glue particles to the sheet with a flexible binder. This method replaced the former method of coating glue on a sheet of paper, then passing it through a breaker to break up the glue film.

Nashua has been advertising Davac for several years, now, but only last summer, during judging of a contest centered around the theme "I like Davac because . . ." many uses for this label paper were revealed which even the company's own technical and marketing men had not suspected.

Among some of the unusual uses for Davac labels are for automobile manufacturers pre-pricing stickers (necessary since new federal legislation requiring manufacturers to affix list prices to their cars); political campaign stickers and stamps; automobile and store window stickers; trading and credit stamps; duplicating business forms; hotel and travel stickers; baggage service stamps, lettering clips for use in paste-ups and layouts in preparation of copy for lithography; and library identification forms used as book inserts.

Other label paper manufacturers have made similar improvements in their adhesives which make their papers vastly superior to those marketed a few years ago.

Lithographers are advised to give another look to the label field, in light of recent improvements of materials, such as Davac. It can be a lucrative market for the offset shop willing to become acquainted with it.★

LORD BALTIMORE

(*Continued from Page* 33)

was done to cut this unnecessary drain. (*A brief report was published in the December ML*).

Previously, "Tim" related, responsibility for correcting hazardous conditions and educating employes to "watch your step" rested on the shoulders of foremen or supervisors. If the foreman had time, he might occasionally talk safety, but mostly he was primarily interested in production and the matter of avoiding accidents was simply skipped over lightly or completely disregarded.

After many conferences, a systematic safety program was decided on and responsibility for carrying it out was delegated to the personnel director.

"We started out," said Mr. Timnaus, "with educational discussions at management, supervisory and worker levels. This gave everyone, from the president to the newest employe, a complete understanding of the project's purpose and the part each must play in it."

Safety Committee

Next in order was organization of a plant-wide employe safety committee, composed of one or two representatives from each department. No one can get on this committee until he has received a certificate from the "department of education," which was set up to provide the necessary training course in industrial safety.

"It is amazing," Mr. Timanus told ML, "to see what a committee like this, backed by indoctrinated supervision and enthusiastic management, can do in helping eliminate hazardous and unsafe working conditions."

As an example he told how, at the request of management, employes drew up lists of all hazards they personally knew about on every piece of equipment in the plant and offered suggestions for correcting the faults. The complete list was so lengthy it would have taken the company's own maintenance crew perhaps two years to correct everything. An outside engineering firm accordingly was hired to handle this job and it was completed in about a month.

"When our employes realized that action on their suggestions and recommendations was really taking place, and pronto at that," said Mr. Timanus, "their enthusiasm was tremendous. This is one of the main reasons why there is a waiting list of employes who want to serve on the safety committee."

Monthly Meetings

Once each month, "Tim" continued, supervisors and department heads have a dinner meeting and the foreman likewise have a similar separate meeting at which program time is generously devoted to discussion of safety problems which have arisen since the last gathering.

"We still have an occasional accident that could have been prevented," said Mr. Timanus. (Three in 1958 up to the time of his Chicago speech.) But we have all become so safety conscious that when a mishap does occur, no matter how slight, everybody gets upset about it. Supervisors check up; so do safety committee members in the department involved; and the superintendent himself sometimes gets into the act.

"When investigation of an accident is under way and the questions fly back and forth, it makes one realize the truth of the old adage that 'two heads are better than one."

Mr. Timanus insists, however, that the safety program isn't ideal yet and won't be until the frequency rate is zero every year.★

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(The advertisers' index has been accurately checked but no responsibility can be assumed for errors or omissions.)

TALE ENDS

IT'S always a difficult task to single out for comment any of the many striking Christmas gifts ML receives each year. These run the gamut from

holiday wrapping paper from the leading paper companies, to handsome lithographed prints and the inevitable, but always welcome, calendars. In selecting one calendar from among the dozen or so beautiful ones we've received to date, serious consideration will be given to the fine one from Raleigh Lithograph Corp., in New York. A humorous treatment of the signs of the Zodiac theme has been employed in the 1959 calendar, which is lithographed in gold, silver and black. The cover is gold stamped on brown leather. Design credit goes to Robert O'Dell.

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Also happily received was a box of assorted paper napkins, tablecloths, plates, etc. from Nashua Corp., Nashua, N. H. There's something for nearly every season, so this is a gift that will be appreciated all year long.

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The Christmas issue of "Tips from Your Printer" carried a pine-spruce aroma applied to the magazine during printing. (The copy has been on our desk for two weeks now, and the scent is as strong as ever!) An all offset magazine, Tips is observing its second Christmas. It is mailed to buyers of printing and lithography in Missouri, Oklahoma, Illinois and Indiana. It is sold on a franchise basis to one printer in each city and town in these states and soon will be circulated in Canada as well. The lithographed magazine is published by the Tips Publishing Co., in Chicago.

•

In an effort to expand the base of its membership, the Technical Association of the Graphic Arts polled its members last month on the question of admitting student members to the research organization at $5 a year and increasing active and associate member dues from $7.50 to $10. The moves seem like an intelligent way to increase the effectiveness of TAGA and both seem certain of passage. (At presstime, ML learned that both measures had passed, and by comfortable majorities.)

•

Printers of outdoor billboard posters have received an assist from the baseball's minor leagues, which have launched a billboard campaign to display advertising on the fences of every minor league ball park in the country. Three sponsors had been definitely lined up by late December, ML learned, for advertisements that would ordinarily have been displayed along the nation's highways. In addition to taking up the slack in offset plants caused by the ban on highway posters, the plan is expected to enrich minor league coffers by more than a million dollars, according to a United Press International news report.

•

The recession is pretty much behind us, ML concludes from several recent conversations with lithographers around the country. While business for many was markedly off in 1958, there was a definite pickup at year's end, and 1959 is looked upon as a year for recovery that should bring bigger profits. We certainly hope so!★

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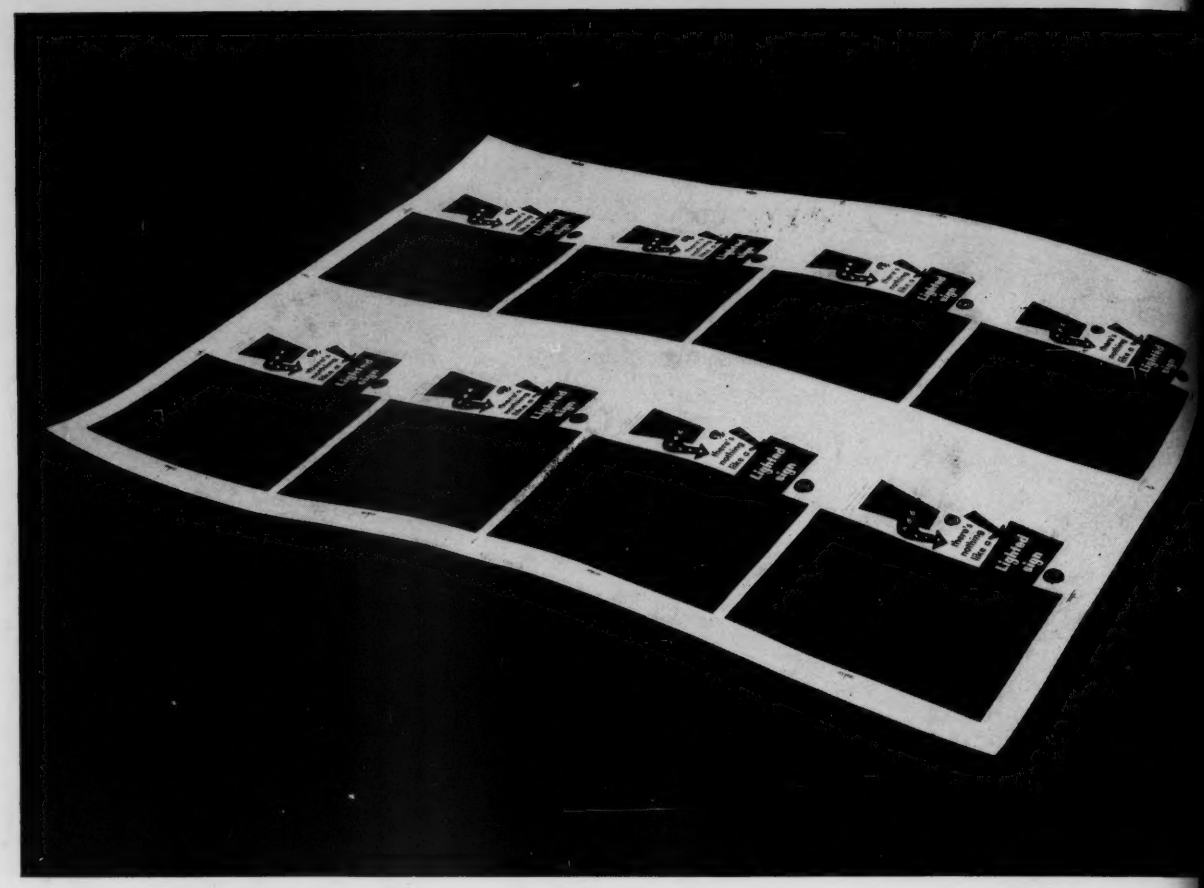

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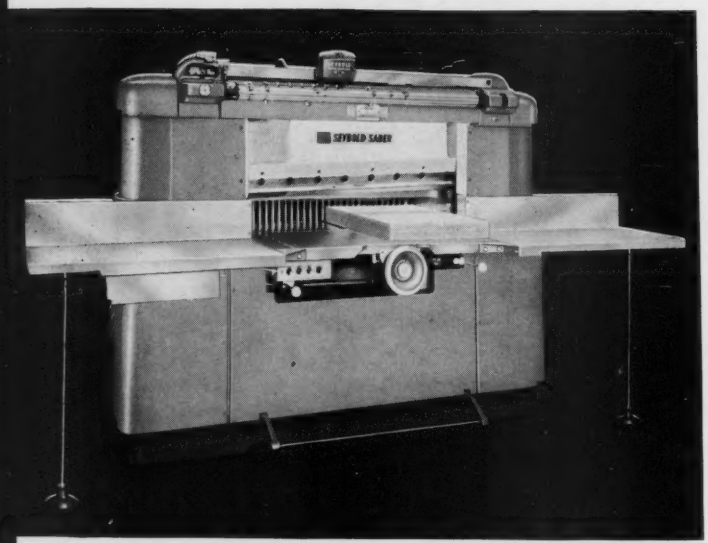

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